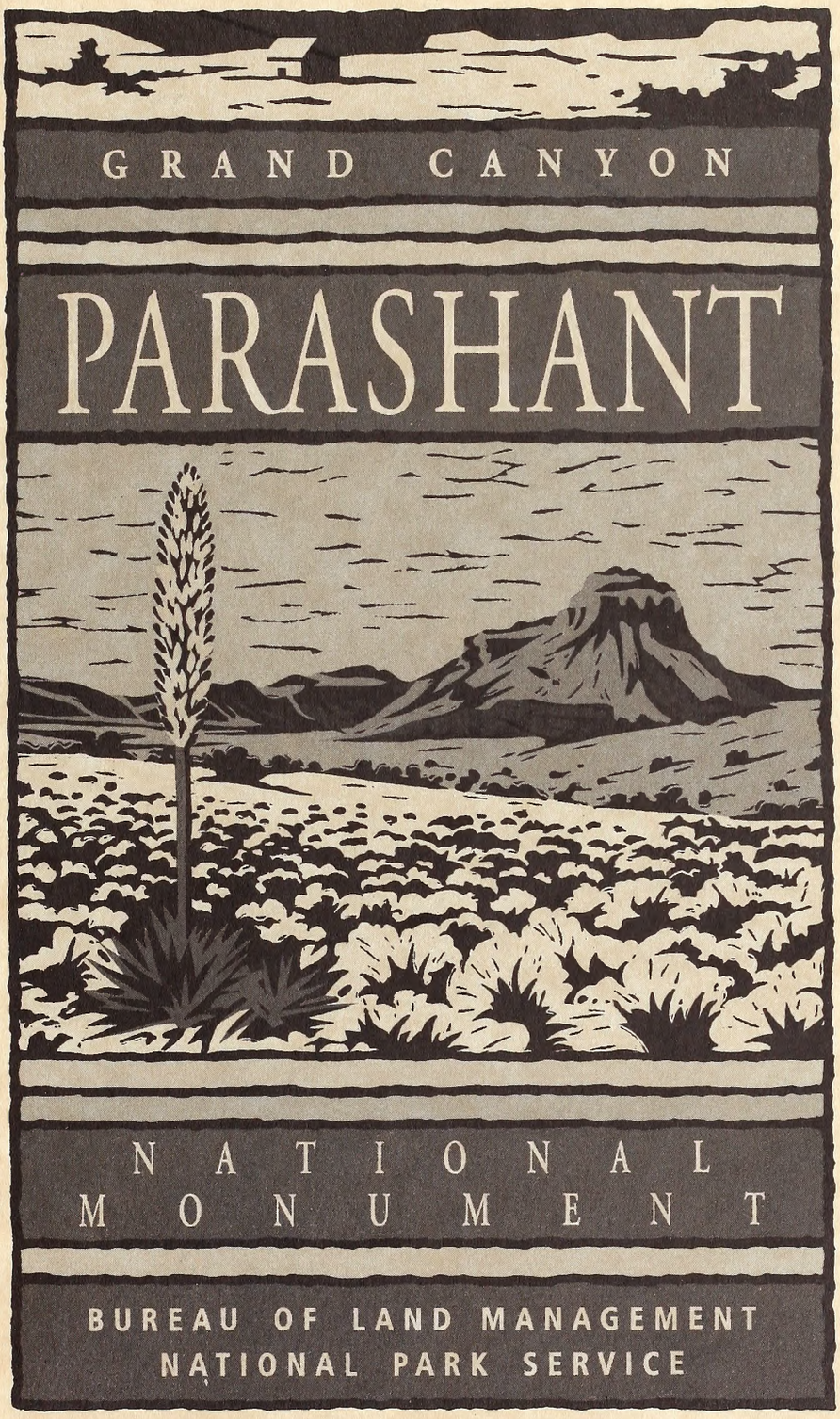
BLM LIBRARY
88067837

Grand Canyon-Parashant National Monument

Records of Decision and Resource Management Plan/General Management Plan



February 2008

U.S. Department of the Interior
Arizona Strip District, Bureau of Land Management
Lake Mead National Recreation Area, National Park Service

BLM • NPS

#7710440088 ID 880678837 HD 243 .A6 P373 2008

U.S. Department of Interior
Bureau of Land Management

GRAND CANYON-PARASHANT NATIONAL MONUMENT

RECORD OF DECISION
APPROVED RESOURCE MANAGEMENT PLAN

COOPERATING AGENCIES:
Arizona Department of Transportation
Arizona Game and Fish Department
Coconino County, Arizona
Federal Highways Administration
Kaibab Paiute Tribe
Kane County, Utah
Mohave County, Arizona
Town of Colorado City, Arizona
Town of Fredonia, Arizona
Washington County, Utah

February 2008

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
NATIONAL PARK SERVICE
345 East Riverside Drive
St. George, Utah 84790
www.az.blm.gov and www.nps.gov/para

TAKE PRIDE IN AMERICA

In Reply Refer To:
AZ-100: 1610

February 2008

Dear Reader:

I am pleased to announce that after five years of hard work and collaborative effort, the Grand Canyon-Parashant National Monument Management Plan (Approved Plan) is complete. As the first management plan for this Monument, it will provide guidance for the managing 808,744 acres of Bureau of Land Management (BLM)-administered lands and 208,447 acres of National Park Service (NPS)-administered lands in northern Arizona. These lands are within the Arizona Strip BLM District and Lake Mead National Recreation Area (NPS), in Mohave County, Arizona. They are located north of the Colorado River and the Grand Canyon and east of the Nevada state line. These lands include the ponderosa pine forested areas of Mt. Trumbull, Mt. Logan, and Mt. Dellenbaugh; the Mojave Desert in the Grand Wash and Pakoon areas; Kelly and Twin Points overlooking the Grand Canyon; and the Shivwits and Uinkaret plateaus.

The attached joint Management Plan and individual Records of Decision (RODs), one for BLM decisions and one for NPS decisions, have been prepared in accordance with the Federal Land Policy Management Act, the National Parks and Recreation Act, and the National Environmental Policy Act. The document was sent to members of the public who requested a copy and to pertinent local, State, Federal, and Tribal governments.

These two RODs finalize the proposed decisions presented in the Arizona Strip Proposed Plan/Final Environmental Impact Statement (FEIS) that was released on March 2, 2007, and subject to a 30-day protest period that ended on April 2, 2007. Seven protest letters were received on BLM decisions in the FEIS and reviewed by the BLM Assistant Director for Renewable Resources and Planning in Washington, D.C. After careful consideration of all points raised in the protest letters, the Assistant Director concluded that the planning team and responsible decision makers followed all applicable laws, regulations, policies, and pertinent resource considerations in development of the Proposed Plan in the FEIS. Minor adjustments or points of clarification that were incorporated into the Approved Management Plan respond to issues raised in the protest process and final BLM review. These are discussed in the BLM ROD under the sections entitled Modifications and Clarifications. The protest review did not result in any significant changes to the Proposed Plan. No letters were received regarding NPS decisions in the FEIS.

These RODs serve as the final decision for the land use planning decisions described in the attached Approved Plan. Now that the RODs are signed, we look forward to your

assistance and participation as we implement the decisions contained in this Approved Plan.

Route designations are described and mapped as part of the travel management decisions included in the RODs and Approved Plan. Route designations are implementation level decisions. Therefore, an appeal opportunity under the Department of Interior's appeal regulations at 43 CFR Part 4 is being provided at this time for the route designations proposed within the Approved Plan.

Copies of the RODs and the Approved Plan can be obtained on the web at https://www.blm.gov/az/LUP/strip/strip_plan.htm. Additional printed or CD copies may be obtained at the address above or requested by email at Arizona_Strip@blm.gov or by phone at (435) 688-3200.

We are pleased to provide this copy of the Grand Canyon-Parashant National Monument Management Plan for your use and reference. We greatly appreciate all who contributed to the completion of this Approved Plan, including other Federal agencies, Tribal governments, and State and local governments. This also includes the ten Cooperating Agencies that worked with us over the years (Mohave and Coconino counties in Arizona, Washington and Kane counties in Utah, the Kaibab Paiute Tribe, the towns of Fredonia and Colorado City, Arizona Game and Fish Department, Arizona Department of Transportation, and the Federal Highway Administration). We also appreciate the extensive public involvement during this time by groups, organizations, and individuals. Public input informed and improved the planning documents and we hope you will continue to work with us as we implement the decisions in this Approved Plan. If you need information or have questions, please contact us at (435) 688-3200.

Sincerely,

Jeffrey S. Bradybaugh

Jeff Bradybaugh
NPS Superintendent and
Acting BLM Monument Manager

TABLE OF CONTENTS

Dear Reader Letter

RECORDS OF DECISION

BUREAU OF LAND MANAGEMENT
NATIONAL PARK SERVICE

APPROVED PLAN

CHAPTER 1: INTRODUCTION

PURPOSE AND NEED **1-1**
PLANNING AREA AND MAP **1-2**
ISSUES ADDRESSED **1-4**
ISSUES USED TO DEVELOP ALTERNATIVES 1-4
ISSUES ADDRESSED IN OTHER PARTS OF THE EIS 1-8
ISSUES CONSIDERED BUT NOT FURTHER ANALYZED 1-8
PLANNING CRITERIA/LEGISLATIVE CONSTRAINTS **1-10**
PLANNING PROCESS **1-13**
RELATIONSHIP TO BLM AND NPS POLICIES, PLANS, AND PROGRAMS 1-14
COLLABORATION 1-17
RELATED PLANS **1-20**
OVERALL VISION **1-20**
PURPOSE, SIGNIFICANCE AND MISSION STATEMENTS 1-20

CHAPTER 2: THE PLAN

INTRODUCTION **2-1**
MANAGEMENT UNITS **2-1**
COMMUNITY MANAGEMENT UNIT 2-1
CORRIDORS MANAGEMENT UNIT 2-3
BACK ROADS MANAGEMENT UNIT 2-3
OUTBACK MANAGEMENT UNIT 2-3
MANAGEMENT DECISIONS **2-4**
LAND USE PLAN DECISIONS 2-5
IMPLEMENTATION DECISIONS 2-6
DECISION TABLES **2-6**
ADMINISTRATIVE ACTIONS **2-105**
ENVIRONMENTAL ANALYSIS AND INTERRELATIONSHIPS **2-112**
REQUIREMENTS FOR FURTHER ENVIRONMENTAL ANALYSIS 2-112
INTERRELATIONSHIPS 2-113
PUBLIC INVOLVEMENT **2-115**

CHAPTER 3: IMPLEMENTATION

IMPLEMENTATION SCHEDULE **3-1**
MONITORING **3-1**
ADAPTIVE MANAGEMENT **3-11**

LIST OF TABLES

CHAPTER 2: THE PLAN

Table 2.1. Air, Water, and Soils (Watershed: WS) 2-8
Table 2.2. Geology and Paleontology (GL) 2-10
Table 2.3. Vegetation and Fire and Fuels Management (VM, FM, RP) 2-13
Table 2.4. Wildlife and Fish (WF) 2-32
Table 2.5. Special Status Species (TE) 2-42
Table 2.6. Wild Burros (HB) 2-61
Table 2.7. Cultural Resources (CL) 2-62
Table 2.8. Visual Resources (VR) 2-66
Table 2.9. Soundscapes (SN) 2-68
Table 2.10. Wilderness Characteristics (WC) 2-70
Table 2.11. Lands and Realty (LR) 2-73
Table 2.12. Livestock Grazing (GM) 2-75
Table 2.13. Minerals Management (MI) 2-78
Table 2.14. Recreation & Visitor Services/Interpretation & Environmental Education (RR) 2-80
Table 2.15. Travel Management (TM) 2-92
Table 2.16. Special Designations (AC, WM) 2-101
Table 2.17. Public Health and Safety (HM) 2-104
Table 2.18. Scientific Research (SR) 2-104

CHAPTER 3: IMPLEMENTATION

Table 3.1: Preliminary Monitoring Strategies 3-2

LIST OF MAPS

CHAPTER 1: INTRODUCTION

Map 1.1. Grand Canyon-Parashant National Monument Location Map 1-3

CHAPTER 2: THE PLAN

Map 2.1. Management Units 2
Map 2.2. Geologic Formations 12
Map 2.3. Ecological Zones 30
Map 2.4. Wildland Fire Use Allocations 31
Map 2.5. Wildlife Habitat Areas 41
Map 2.6. Desert Tortoise Habitat 60
Map 2.7. Recreation Sites 65
Map 2.8. Visual Resource Management 69
Map 2.9. Wilderness Characteristics 72
Map 2.10. Grazing Allotments 79
Map 2.11. Special Recreation Management Areas 87
Map 2.12. Recreation Management Zones 88
Map 2.13. Recreation Settings (Physical) 89
Map 2.14. Recreation Settings (Social) 90
Map 2.15. Recreation Settings (Administrative) 91
Map 2.16. Travel Management Areas 98
Map 2.17. Off-Highway Vehicle Designations 99
Map 2.18. Designated Transportation System Route Network 100

LIST OF APPENDICES

Appendix A: Grand Canyon-Parashant National Monument Proclamation (#7265) A-1
Appendix B: U.S. Fish and Wildlife Service Consultation: Portions of the Biological Opinion B-1
Appendix C: Arizona Standards and Guidelines for Livestock Grazing Management and Rangeland Health Implementation Status C-1
Appendix D: Livestock Grazing Allotment Management Status D-1
Appendix E: Livestock Grazing Allotment Acres and Animal Unit Months (AUMs) by Land Status E-1
Appendix F: Vegetation Treatment Tools and Methods F-1
Appendix G: Conservation Measures for Special Status Species G-1
Appendix H: Visual Resource Management Classes and Objectives for Classes H-1
Appendix I: Reclamation Stipulations I-1
Appendix J: Recreation Management Areas J-1

Appendix K: Travel Management Areas (TMA), Transportation Plan Contents, and Appropriate Route Construction and Maintenance Standards by TMA K-1
Appendix L: List of Preparers L-1

Glossary ..... End of Document
References Cited ..... End of Document
Index ..... End of Document
Abbreviations and Acronyms ..... End of Document

GRAND CANYON-PARASHANT NATIONAL MONUMENT

RECORDS OF DECISION

Bureau of Land Management

National Park Service

2008

TABLE OF CONTENTS

GRAND CANYON-PARASHANT NATIONAL MONUMENT RECORD OF DECISION **1**
INTRODUCTION 1
PROTEST REVIEW RESULTS 2
THE DECISION 3
OVERVIEW OF THE ALTERNATIVES 3
Alternative A: No Action 4
Alternative B 4
Alternative C 4
Alternative D 5
Alternative E: Proposed Plan 5
Environmentally Preferable Alternative 5
LAND USE PLAN DECISIONS, IMPLEMENTATION DECISIONS, AND ADMINISTRATIVE ACTIONS 7
Land Use Plan Decisions 7
Desired Future Conditions 7
Special Designations 8
Land Use Allocations (Allowable Uses) 8
Management Actions 8
Implementation Decisions 8
Appeal Procedures for Implementation Decisions 10
Administrative Actions 11
MODIFICATIONS AND CLARIFICATIONS 11
Modifications 12
Route Designations 13
Livestock Grazing 13
Clarifications 13
MANAGEMENT CONSIDERATIONS FOR SELECTING THE APPROVED PLAN 14
Mitigation Measures 14
Plan Monitoring 15
Implementation Monitoring 15
Effectiveness Monitoring 16
IMPLEMENTATION OF THE MANAGEMENT PLAN 16
CONSISTENCY REVIEW 16
PUBLIC INVOLVEMENT 17
TO OBTAIN A COPY OF THE MANAGEMENT PLAN 18

GRAND CANYON-PARASHANT NATIONAL MONUMENT RECORD OF DECISION

INTRODUCTION

The Arizona Strip District of the Bureau of Land Management (BLM) prepared this Record of Decision (ROD) on the Proposed Resource Management Plan and Final Environmental Impact Statement (Proposed Plan/FEIS) for Grand Canyon-Parashant National Monument, which was published in January 2007. While the Proposed Plan/FEIS also addressed management of Vermilion Cliffs National Monument and non-Monument public lands administered by the Arizona Strip Field Office, this ROD applies only to those decisions presented in the attached Approved Management Plan (Approved Plan) made by the BLM for management of Grand Canyon-Parashant National Monument, which will be referred to as the "Monument" throughout this document.

The Monument is administered jointly by the BLM and National Park Service (NPS); therefore, the NPS has prepared a separate ROD for the NPS decisions in the Monument, which is attached to the Approved Plan.

On January 11, 2000, Presidential Proclamation 7265 created the Monument to ensure protection of a wide variety of biological objects at the junction of the Mojave Desert and Colorado Plateau and a long and rich human history, which have been preserved by remoteness and limited travel corridors. The Monument also encompasses geological treasures, is full of natural splendor, and offers visitors a sense of solitude.

The Monument is located in Mohave County, Arizona, immediately north of Grand Canyon National Park and east of the state of Nevada, and contains 808,744 acres of BLM-administered land, 208,447 acres of NPS-administered land, 23,205 acres of Arizona State Trust lands, and 7,920 acres of private land. While the Approved Plan includes decisions for managing both BLM and NPS-administered lands, this ROD only addresses the 808,744 acres of BLM-administered lands in the Monument except where the BLM administers programs on NPS-administered lands in the Monument (e.g., livestock grazing).

The Approved Plan was described as Alternative E in the Proposed Plan/FEIS. This ROD provides a summary of protests received and clarifications made in response to protests, a brief summary of the decisions made and other alternatives considered (including a description of the environmentally preferable alternative), management considerations and rationale for the decisions, and an overview of public involvement in the planning process.

PROTEST REVIEW RESULTS

The BLM received seven protest letters during the 30-day protest period provided for the proposed land use plan decisions in the Proposed Plan/FEIS in accordance with 43 Code of Federal Regulations (CFR) Part 1610.5-2. The seven protesting parties are listed below:

1. Kade B. Ballard
2. Jarolyn and Collin Stout
3. The National Trust for Historic Preservation
4. Carolyn B. Shelley
5. Dr. William I. Boarman
6. Peter Bungart, Circa Cultural Consulting
7. The Arizona Wilderness Coalition; Center for Biological Diversity, Grand Canyon Wildlands Council, Sierra Club-Grand Canyon Chapter, and Wilderness Society

Some protesting parties voiced their concern over the protection of resources in the Monument. Some concerns were very general (i.e., the protection of Monument objects), while other concerns were over specific resources and their protection, including areas with wilderness characteristics and cultural resources. Some protesting parties voiced their concern about the impacts of a particular resource use on specific resources, such as the impacts of backcountry airstrips on soundscapes/natural quiet or the impacts of livestock grazing on biological resources (i.e., desert tortoise, riparian areas, forest areas, bighorn sheep, relict leopard frog). Other protesting parties were concerned about the impacts on resource uses and wanted to see the lands in the Monument managed without impairment of the area's productivity. Finally, a number of protesting parties voiced their concern over the data and/or the analysis techniques used in the FEIS, making the following observations or suggestions:

- There is the need to take a hard look at direct, indirect, and cumulative impacts for wilderness characteristics and cultural resources.
- Baseline measurements of natural quiet/soundscapes are necessary for the impact analysis.
- The information used to analyze the impacts of backcountry airstrips on natural resources is inadequate.
- Baseline information used to analyze the impacts on cultural resources is inadequate.
- The range of alternatives is inadequate to provide protection to Monument objects.
- Comments from experts on the Draft EIS were not adequately responded to in the FEIS.

The BLM Director addressed all protests without making significant changes to the Proposed Plan though minor adjustments, corrections, and clarifications, as identified in the Modifications and Clarifications section below.

THE DECISION

The decision of the BLM is to approve the attached document as the Approved Plan for management of BLM-administered lands in the Monument (see Approved Plan). The Approved Plan replaces relevant decisions in the Arizona Strip Resource Management Plan (RMP; BLM 1992), as amended (BLM 1998).

The Approved Plan was prepared under the authorities of the Federal Land Policy and Management Act (FLPMA) of 1976 in accordance with BLM planning regulations at 43 CFR Part 1600 and the National Environmental Policy Act (NEPA) of 1969. The Approved Plan is nearly identical to the Proposed Plan (Alternative E) presented in the Proposed Plan/FEIS. Management decisions and guidance for public lands within the Monument are presented in the Approved Plan attached to this ROD. All decisions covered by the ROD are either land use planning decisions that were protestable under the land use planning regulations (43 CFR Part 1610), or implementation decisions that are now appealable under the regulations listed below.

The NPS Regional Director signed a ROD for NPS decisions on NPS-administered lands in the Monument, which is attached to the Approved Plan.

The Approved Plan emphasizes protection and restoration of the natural and cultural resources while still providing for resource use and enjoyment. Where appropriate, it proposes a combination of management actions including allowing natural processes to continue, applying more hands-on treatment methods, and protecting the remote settings that currently exist in the Monument. All decisions in the Approved Plan must meet the purpose and significance of the Monument and comply with Proclamation 7265. The key components of the Approved Plan (Alternative E) are as follows:

- The Approved Plan responds to public comments to protect resources while still allowing use, especially near the communities.
- The Approved Plan provides the best means to accommodate the widest range of public and agency concerns over resources and resource uses.

OVERVIEW OF THE ALTERNATIVES

Five alternatives, including a No Action Alternative, were analyzed in detail in the Arizona Strip Draft Plan/EIS (2005). The alternatives were developed to address major planning issues identified through public scoping and to provide management direction for resource programs. Each alternative is comprised of a set of decisions representing a distinct concept for land management using a variety of land use planning decision types including desired future conditions, special designations, land use allocations, and management actions. These land use plan decisions provide management direction at a broad scale and guide future actions to govern the protection and use of the resources on BLM-administered lands on the Monument.

ALTERNATIVE A: NO ACTION

Alternative A is the No Action Alternative required by NEPA that represented continued management provided by the Arizona Strip RMP (BLM 1992, as amended). Alternative A also included the directives of Proclamation 7265 and the interim management policy issued pursuant to the proclamation (BLM Instruction Memorandum 2000-062), which provided temporary direction for management of the Monument until the Approved Plan could be completed. As such, Alternative A served as a baseline for comparison with the other alternatives.

Under the Arizona Strip RMP (BLM 1992, as amended), public lands were partitioned into Guidance Areas to protect resources and provide guidance for managing them. Guidance Areas were differentiated by special resource concerns, sensitivities, or characteristics, as identified below:

- **Guidance Area A -**These lands contained a wide variety of resources and values that required continued multiple-use management. Most of these lands did not contain unusual characteristics and were not subject to unusual demands requiring special management attention.
- **Guidance Area B -** These lands were identified by the public and the BLM as having unique resource values and special management needs including important scenic values, exceptional natural features, and fragile physical features. Reclamation would be very difficult after disturbances, which may lead to permanent scars on the landscape. With few exceptions, Area B lands were more remote than those in Area A.

ALTERNATIVE B

Alternative B placed an emphasis on minimal human use/influence, and proposed the fewest miles of open roads and trails. It focused on natural processes and other unobtrusive methods for ecosystem restoration, resource management, and scientific research; more protection and enhancement of remoteness and dispersed recreation; unstructured recreation opportunities; and the least amount of motorized recreation opportunities.

ALTERNATIVE C

Alternative C represented an attempt to balance resource protection and human use/influence. It proposed a moderate amount of open roads and trails; a mix of natural processes and "hands-on" techniques for ecosystem restoration, resource management, and scientific research; and a mix of motorized, non-motorized, dispersed, and structured recreation opportunities.

ALTERNATIVE D

Alternative D placed an emphasis on maximum appropriate human use/influence and the widest array of visitor experiences and opportunities. It included the most miles of open roads and trails (with the exception of Alternative A), and focused on "hands-on" techniques for ecosystem restoration, resource management, and scientific research. As such, it offered fewer remote settings and the most motorized and structured recreation opportunities compared to the other alternatives.

ALTERNATIVE E: PROPOSED PLAN

The BLM revised Alternative E (the Preferred Alternative) in the Arizona Strip Draft Plan/EIS by incorporating comments received during the 90-day public comment period, thus creating the Proposed Plan in the Proposed Plan/FEIS. Through modifications and clarifications in response to the protests received, the Proposed Plan is now the Approved Plan, which is attached to this ROD. In the most comprehensive manner, the Approved Plan is designed to respond to each of the issues and management concerns recognized during the planning process. The BLM determined that the decisions presented under Alternative E (the Proposed Plan) provide an optimal balance between authorized resource use and the protection and long-term sustainability of sensitive resources and/or Monument objects within the Monument.

Alternative E, now the Approved Plan with the clarifications and modifications as described below, emphasizes minimal human influence and use in the more remote sections of the Monument and more human use/influence in the areas adjacent to local communities or in areas presently receiving such use/influence. It attempts to balance human use/influence with resource protection. Where appropriate, it will use a combination of management actions including allowing natural processes to continue, applying more hands-on treatment methods, and protecting the remote settings that currently exist in the Monument.

Environmentally Preferable Alternative

Alternative E, the Approved Plan, is considered by the BLM to be the environmentally preferable alternative when taking into consideration the human (social and economic) environment as well as the natural environment. The U.S. Council on Environmental Quality (CEQ) has defined the environmentally preferable alternative as the alternative that will promote the national environmental policy as expressed in Section 101 of NEPA. The six broad policy goals for all Federal plans, programs, and policies are listed below:

1. Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations.
2. Assure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings.

3. Attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences.
4. Preserve important historic, cultural, and natural aspects of our national heritage, and maintain, wherever possible, an environment that supports diversity and variety of individual choice.
5. Achieve a balance between population and resource use, which will permit high standards of living and a wide sharing of life's amenities.
6. Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

In comparison with the other alternatives analyzed, Alternative E best meets the above NEPA goals for the future management of the Monument. It provides a high level of protection of natural and cultural resources, while providing for a wide range of beneficial uses of the environment. The No Action Alternative, Alternative A, would have allowed visitor use to increase unchecked, thereby causing potential adverse impacts on the visitor experience and resource conditions. Alternative A also did not identify additional lands to be managed to maintain wilderness characteristics. For these reasons, the No Action Alternative is not preferable from an environmental perspective.

Alternative B represented the alternative with the most "hands off" management. It has the fewest miles of access and designated routes, most acres of lands managed to maintain wilderness characteristics, and the least aggressive forms of treatment for noxious and invasive species. Although this alternative is the most "natural" management alternative, it does not provide for proactive visitor or resource management. Consequently, Alternative B was not selected as the environmentally preferable alternative because it does not achieve a balance between visitor use/access and protection of resources, nor does it involve restoration of natural processes and conditions.

Alternative C represented a better balance of visitor use and resource conditions, but did not recognize the unique nature of the Monument in terms of its accessibility and opportunities to provide a range of appropriate recreational experiences to Monument visitors. This alternative does not attain the widest range of beneficial uses of the environment without degradation.

Alternative D represented the alternative with the most "hands-on" management, maximum human use/influence, the most recreation opportunities, and the fewest acres managed to maintain wilderness characteristics. This alternative proposed extensive proactive restoration of species, which meant fewer acres restored via natural means, which would lead to more significant alterations to the primitive landscape. Alternative D provided a high range of visitor access and recreation opportunities, but fewer opportunities for primitive and remote experiences. For these reasons, this alternative did not achieve the balance between resource protection and resource use that permitted enhancement of resource conditions and visitor experience.

Alternative E (the Proposed Plan and now the Approved Plan) takes the best components of each of the four alternatives described above to ensure protection of Monument resources and values while providing a wide range of beneficial uses. This alternative acknowledges that the more isolated areas of the Monument would be managed to preserve their remoteness and maintain wilderness characteristics. At the same time, it provides appropriate access to areas of high use and along major travel corridors to ensure that a range of appropriate outdoor recreation is available. Overall, Alternative E best meets the requirements of Section 101 of NEPA and was thus selected as the environmentally preferable alternative by the BLM.

LAND USE PLAN DECISIONS, IMPLEMENTATION DECISIONS, AND ADMINISTRATIVE ACTIONS

The Approved Plan provides overall direction for management of all resources on BLM-administered land in the Monument. Many land use plan decisions are implemented or become effective upon publication of the ROD for the Approved Plan and may include desired future conditions, land use allocations (allowable uses) or designations, and special designations.

Land use plan decisions represent the desired outcomes and the actions needed to achieve them. Such decisions were attained using the planning process found in 43 CFR 1600 and guide future land management actions and subsequent site-specific implementation decisions. When presented to the public as proposed decisions, land use plan decisions can be protested to the BLM Director; however, they are not appealable to Interior Board of Land Appeals (IBLA).

Implementation decisions and management actions that require additional site-specific project planning, as funding becomes available, will require further environmental analysis. Some implementation decisions (e.g., route designations) are finalized with this ROD and thus require no further environmental analysis. Administrative actions are not land use planning or implementation decisions, but are a key component of the overall Plan because they describe the BLM's day-to-day actions to help meet desired future conditions. The BLM will continue to involve and collaborate with the public during implementation of the Approved Plan. Brief descriptions of the types of decisions are presented below.

LAND USE PLAN DECISIONS

Desired Future Conditions

Land use plans express desired future conditions or desired outcomes in terms of specific goals, standards, and objectives for resources and/or uses. Desired future conditions include legal mandates, numerous regulatory responsibilities, national policy, BLM state director guidance, and other resource or social needs. Land use plans are designed to most effectively meet these desired future conditions through land use allocations, special designations, or management actions.

Special Designations

Special designations include those that are designated by Congress for special protection, such as wilderness areas (see the Approved Plan). Such designations are not land use plan decisions; however, recommendations for designation can be made to Congress at the land use plan level. Congress may then act on these recommendations at a later time.

Administrative designations made by the BLM, such as watchable wildlife viewing sites, are also considered special designations and can be made in the land use plan (see the Approved Plan).

Land Use Allocations (Allowable Uses)

Allowable, restricted, or prohibited use on public lands identify lands where uses are allowed (land use allocations), including any restrictions needed to meet goals and objectives. Areas may be identified to exclude specific uses in order to protect resource values. Land use allocations have geographic boundaries and are represented by polygons on the maps in Chapter 2 of the Approved Plan. It is common for specific resource or use allocations to overlap with other resource or use allocations.

Management Actions

Management actions include stipulations, guidelines, best management practices, and design features that help guide day-to-day activities on public lands to meet desired future conditions. Management actions are categorized as actions to achieve desired outcomes, including actions to maintain, restore, or improve land health.

IMPLEMENTATION DECISIONS

Implementation decisions (or activity level decisions) are management actions tied to a specific location that take action to implement land use plan decisions. Implementation decisions generally constitute the BLM's final approval allowing on-the-ground actions to proceed and require appropriate site-specific planning and NEPA analysis. Such decisions may be incorporated into implementation plans (activity or project plans) or may exist as stand-alone decisions.

Unlike land use plan decisions, implementation decisions are not subject to protest under the planning regulations. Instead, implementation decisions are subject to various administrative remedies, particularly appeals to the IBLA (under 43 CFR 4.410). Where implementation decisions are made as part of the land use planning process, they are still subject to the appeals process or other administrative review as prescribed by the specific resource program regulations after the BLM resolves the protests to land use plan decisions and makes a decision to adopt the management plan. For example, the designation of a specific route is an implementation level

decision, rather than a land use plan decision. Consequently, individual route designations are subject to a separate appeals process that is described below.

All route designations (i.e., routes designated as open, see attached Approved Plan) are finalized with this ROD, with the exception of the ten high potential route areas identified below, and may be appealed at this time.

Except for the route designations, the other implementation decisions identified in Chapter 2 of the Approved Plan will all require site-specific planning and further NEPA analysis before they are implemented. These implementation decisions are not appealable at this time, but will be appealable at the time they are finalized.

In making the route designation decisions, the BLM adhered to IM 2007-030 regarding compliance with Section 106 of the National Historic Preservation Act (NHPA), which requires the BLM to consider the potential for area, road, and trail designations to affect historic properties (sites eligible for or listed on the National Register of Historic Places). These potential adverse effects could result from designating new routes or opening new areas to OHV use; OHV use shifting, concentrating or expanding travel onto other existing routes or into areas likely to have historic properties; and the potential for cumulative effects. Under the Approved Plan, no new routes are designated open and no open OHV areas are designated in the Monument. The remaining potential impacts to historic properties in the Monument are direct impacts, indirect impacts, and cumulative effects from the use of the designated road system, including impacts resulting from the concentration of use created by the designated route system or continued impacts to specific historic sites by designating specific routes.

In order to determine the direct, indirect, and cumulative impacts to historic properties on the Monument, Arizona Strip District and Monument archaeologists and managers used all Class I (existing information) and Class III (intensive inventory) cultural resource information available, including the Geographic Information System (GIS) cultural resource site database which was overlain onto the designated route GIS layer. A 40-meter buffer (20 meters either side of the route centerline) was used to capture any intersections of possible cultural resource sites with routes. The archaeologists examined U.S. Geological Survey (USGS) topographic maps and GIS data for the Monument to determine if any historic properties in the Monument would be impacted by the use of designated routes. One route area was found in the Monument that would continue to experience cultural resource impacts from use of existing routes. A field trip to the area by management and staff confirmed that use of potentially designated open routes would continue to impact this area. The following recommendations were made and implemented as a result of this field visit:

1. Designation of Route P3018 was changed from open to mitigate open to protect cultural resources.

2. Within two years of the signing of this ROD, 61 recorded cultural resource sites that may potentially be impacted by designated roads in the Monument will be verified in the field and any impacts mitigated, as necessary. The precise location and potential impacts to these cultural resource sites are unknown at this time because they were recorded in the 1970s or 1980s when only 15-minute USGS topographic maps were available for the area. In addition, site-recording techniques were not as precise as current methods. Ongoing inventories to comply with Sections 106 and 110 of the NHPA will also continue in the Monument.

3. Ten high-potential route areas on the Monument are recommended for Class III (intensive) cultural resource inventory before route designation occurs in order to determine and mitigate potential route impacts in compliance with IM 2007-030. These routes are not designated with the Approved Plan but would be designated within five years from the signing of this ROD and once Class III inventory and Section 106 compliance is complete, at which time a separate decision will be issued. These high-potential route areas are as follows:

    - Northern portion of the Monument: P1005, P1053, P1072, P2001
    - Poverty Mountain area: P4001
    - Mt. Trumbull area: P6004, P6005, P6007, P6012, P6032

Appeal Procedures for Implementation Decisions

Any party adversely affected by an implementation decision may appeal within 30 days of receipt of this decision in accordance with the provisions of 43 CFR Part 4.4. The appeal must include a statement of reasons or file a separate statement of reasons within 30 days of filing the appeal. The appeal must state if a stay of the decision is being requested in accordance with 43 CFR 4.21 and must be filed with the Monument Manager at the following address:

Grand Canyon-Parashant National Monument
345 East Riverside Drive
St. George, UT 84790

A copy of the appeal, statement of reasons, and all other supporting documents shall be sent to the Regional Solicitor at the following address:

Lawrence J. Jensen, Regional Solicitor
U.S. Department of the Interior
6201 Federal Building
125 South State Street
Salt Lake City, Utah 84138-1180

If the statement of reasons is filed separately, it must be sent to the following address:

Interior Board of Land Appeals
Office of Hearings and Appeals
4015 Wilson Boulevard
Arlington, VA 22203

It is suggested that any appeal be sent certified mail, return receipt requested.

Request for Stay

Any party wishing to file a request for stay pending the outcome of an appeal of one or more implementation decisions must show sufficient justification based on the following standards under 43 CFR 4.21:

- The relative harm to the party if the stay is granted or denied
- The likelihood of the appellant's success on the merits of the stay
- The likelihood of immediate and irreparable harm if the stay is not granted
- Whether the public interest favors granting the stay

As noted above, the request for stay must be filed with the Monument Manager at the address listed above.

ADMINISTRATIVE ACTIONS

Although the BLM's intent and commitment to accomplish administrative actions is generally addressed in EIS- or Environmental Assessment (EA)-level documents, such activities are not management decisions at either the land use plan or implementation level. Administrative actions are day-to-day activities conducted by the BLM, often required by FLPMA, but do not require NEPA analysis or a written decision by a responsible official to be accomplished. Examples of administrative actions include mapping, surveying, inventorying, monitoring, and scientific research and studies.

MODIFICATIONS AND CLARIFICATIONS

Modifications and clarifications were made to the Approved Plan based on the review and resolution of the protest letters, as well as from internal review by the BLM and NPS. The agreed upon clarifications or modifications to the decisions are provided below.

MODIFICATIONS

The reference to mountain bikes on "existing routes" (FEIS, p. 2-172) has been changed in the Approved Plan to assure that the Recreation and Visitor Services desired future conditions properly aligns with the Travel Management direction. The desired future condition now reads (changes shown in strikeout; see the desired future conditions under Recreation Management of the Recreation and Visitors Services section of the Approved Plan):

> In Backways and Specialized TMAs, recreation opportunities associated with somewhat remote settings, such as exploring backcountry roads and trails, vehicle camping, hunting, sightseeing, mountain biking, recreation aviation, and picnicking will be maintained/enhanced ~~as well as mountain biking opportunities on existing routes~~, provided they will be compatible with the protection and enhancement of sensitive resource values and Monument objects, where appropriate.

In order to comply with the Monument proclamation prohibiting motorized and mechanized vehicle use off road, the following revisions are made in Chapter 2 decisions regarding Travel Management:

- "Motorized and mechanized vehicle use would be limited to designated roads and trails on 762,688 acres on BLM and NPS land." (FEIS, Table 2.15, Travel Management, Parashant, p. 2-216)
- "All vehicular travel in the Monuments would be allowed only on roads routes designated as part of the transportation system. To protect Monument objects, no areas would be authorized for driving off these designated roads routes (e.g., cross-country) except for authorized administrative and emergency purposes." (FEIS, Table 2.15, Travel Management, Parashant, p. 2-218)
- "In areas designated as 'limited' in National Monuments and along national trails, motorized and mechanized use would keep within the designated road route with reasonable use of the shoulder and immediate roadside, allowing for vehicle passage, emergency stopping, or parking, unless otherwise posted." (FEIS, Table 2.15, Travel Management, Parashant, p. 2-218)
- "Trail construction (non-motorized and non-mechanized only [bolded text added]) would occur to support protection and/or enhancement of Monument objects, RMZ objectives or to resolve issues of public safety, user conflicts, or resource protection." (FEIS, Table 2.15, Travel Management, Parashant, p. 2-224)
- "New permanent roads routes would not be constructed adjacent to or within designated wilderness or NPS proposed wilderness." (FEIS, Table 2.15, Travel Management, Parashant, p. 2-225)
- "New permanent road motorized route construction on BLM lands would be the minimum necessary to achieve Plan provisions and to produce targeted recreation

opportunities and benefits in RMZs if protection and/or enhancement of Monument objects would be ensured." (FEIS, Table 2.15, Travel Management, Parashant, p. 2-225)

Route Designations

The following modifications were made to designated routes in the Monument:

- Route P3018 is designated mitigate open instead of open in order to protect cultural resources in this area.

See the Monitoring Table in Chapter 3 of the Approved Plan for specific information on monitoring the levels of impact from motorized vehicles on designated roads through desert tortoise habitat in the Monument.

Livestock Grazing

On Map 2.8 in the FEIS (Grazing Allotments), hachuring that represented forage reserves was removed from the southern portion of the Pakoon Springs Grazing Allotment because this area is unavailable for grazing under the Approved Plan.

CLARIFICATIONS

As the result of protests and continued internal review, the BLM made clarifications in the Approved Plan and one clarification on the Summary of Impacts Table from the Proposed Plan/FEIS, which is noted in the following paragraph.

In the Recreation Section of the Proposed Plan/FEIS, the Summary of Impacts Table did not accurately convey the content of the Chapter 4 impact analysis. That analysis for Alternatives C and E stated, "The impacts to settings and opportunities would be the same as those described under Alternative B, but the degree of impact to both motorized and non-motorized recreation would be significantly less" (FEIS page 4-299). The summary table failed to "downsize" the potential impacts for Alternatives C and D from "major" to "minor to moderate."

The ROD/Approved Plan contains appropriate mitigation measures designed to eliminate existing and/or avoid future adverse effects to Monument objects (see Chapter 3). Monitoring strategies (including indicators, protocols, and frequency) to address impacts to natural and cultural resources can be found in Chapter 3 of the attached Approved Plan.

The ROD/Approved Plan also contains more information on how the agency complied with IM 2007-030 (including schedules for inventory and Section 106 compliance) in making route designation decisions regarding cultural resources (see previous discussion on pages 9 and 10 of this ROD).

MANAGEMENT CONSIDERATIONS FOR SELECTING THE APPROVED PLAN

The alternatives described in the Draft Plan/EIS, in addition to the public comments and input provided throughout this planning process, were considered in preparing the Proposed Plan. The Proposed Plan depicted a combination of decisions from the five alternatives considered in the Draft Plan/EIS, with emphasis on the Preferred Alternative (Alternative E).

This same approach for managing the Monument was chosen as the Approved Plan because:

a. It most effectively accomplishes the overall objectives of protecting Monument resources and values and facilitates appropriate research.
b. It best addresses the diverse community and stakeholder concerns in a fair and equitable manner.
c. It provides the most workable framework for future management of the Monument.

Among the attributes that led to this determination are provisions for protecting Monument resources (archaeological, historic, paleontological, geological, and biological), including special features such as special status species and riparian areas, while providing for visitor use in a manner consistent with protecting Monument resources and values.

The Approved Plan responds to increasing demands for recreation on BLM-administered lands while adhering to FLPMA's mandate for multiple use management and sustained yield of renewable resources. The Approved Plan is very similar to the Proposed Plan, containing only minor revisions and clarifications stemming from protests and internal review.

The Approved Plan responds to travel management and access issues by designating routes and identifying routes to be open, closed, or available for administrative use only. A travel management plan for the Monument will be completed within five years from the date of this ROD.

MITIGATION MEASURES

Measures to avoid or minimize environmental harm were built into the Approved Plan where practicable and appropriate. Many of the standard management provisions will minimize impacts when applied to activities proposed in the Monument. The Arizona Standards for Rangeland Health and Guidelines for Grazing Administration (BLM 1996) will be used as the base standards to assess the health of BLM-administered lands in the Monument. Best management practices will be used where applicable for a number of uses including livestock grazing, recreation management, and realty actions. Additional measures to mitigate environmental impacts may also be developed during subsequent NEPA analysis at the activity-

level planning and project stages, or through legally-mandated consultations covering those same proposed actions.

PLAN MONITORING

As the Approved Plan is implemented, the BLM expects that new information gathered from field inventories and assessments, research, other agency studies, and other sources will update baseline data or support new management techniques and scientific principles. To the extent that such new information or actions address issues covered in the Approved Plan, the BLM will integrate the data through a process called plan maintenance or updating. This process includes the use of monitoring, which is the repeated measurement of activities and conditions over time with the implied purpose to use this information to adjust management, if necessary, to achieve or maintain resource objectives. Bureau of Land Management planning regulations (43 CFR Part 1610.4-9) call for monitoring RMPs on a continual basis and establishing intervals and standards based on the sensitivity of the resource to the decisions involved. CEQ regulations implementing NEPA state that agencies may provide for monitoring to assure that their decisions are carried out and should do so in important cases (40 CFR Part 1505.2(c)).

Plan implementation also includes the use of an adaptive management strategy. As part of this process, the BLM will review management actions and the Approved Plan periodically to determine whether the objectives set forth in this and other applicable planning documents are being met. Where they are not being met, the BLM will consider appropriate adjustments. Where the BLM considers taking or approving actions that would alter or not conform to overall direction of the Approved Plan, the BLM will prepare a plan amendment and environmental analysis in making its determinations and in seeking public comment.

There are two types of monitoring (implementation and effectiveness), which are described below.

Implementation Monitoring

Implementation monitoring, known by some agencies as compliance monitoring, is the most basic type of monitoring and simply determines whether planned activities have been implemented in the manner prescribed by the Approved Plan. As such, implementation monitoring documents the BLM's progress toward full implementation of the land use plan decision. There are no specific thresholds or indicators required for this type of monitoring, but progress towards plan implementation will be evaluated and reported at a 5-year interval from the date of approval of the Approved Plan. Aspects of effectiveness monitoring would also be addressed in the evaluation.

Effectiveness Monitoring

Effectiveness monitoring determines if the implementation of activities has achieved the desired future conditions (i.e., goals and objectives) set forth in the Approved Plan. Effectiveness monitoring asks the following question: "Was the specified activity successful in achieving the objective?" Answering this question requires knowledge of the objectives established in the Approved Plan as well as indicators that can be measured. Indicators are established by technical specialists to address specific questions and avoid collection of unnecessary data. Success is measured against the benchmark of achieving the goals and objectives (i.e., desired future conditions) established by the Approved Plan, which may include regulated standards for resources such as endangered species, air, and water. The interval between these efforts will vary by resource and the expected rate of change, but effectiveness monitoring progress will generally be reported to the Monument manager on an annual basis. These reports will include trends and conclusions, when appropriate, and be incorporated into the 5-year evaluation reports.

The BLM will monitor the Approved Plan to determine whether the objectives set forth in this document are being met and whether applying the land use plan direction is effective (see the Approved Plan). If monitoring shows land use plan actions or best management practices are not effective, the BLM may modify or adjust management without amending or revising the Approved Plan as long as assumptions and impacts disclosed in the analysis remain valid and broad-scale goals and objectives are not changed (see the Approved Plan). Where the BLM considers taking or approving actions that will alter or not conform to overall direction of the Approved Plan, the BLM will prepare a plan amendment or revision and environmental analysis of appropriate scope.

IMPLEMENTATION OF THE MANAGEMENT PLAN

Implementation of the Approved Plan will begin upon publication of its Notice of Availability (NOA) in the *Federal Register*. Some decisions in the Approved Plan require immediate action and will be implemented upon publication of the ROD and Approved Plan. Other decisions will be implemented over a period of years. The rate of implementation is tied, in part, to BLM's budgeting process. Implementation of the Approved Plan will occur in accordance with the implementation and adaptive management framework described in Chapter 3 of the attached Approved Plan.

CONSISTENCY REVIEW

The Arizona Governor's Office did not identify any inconsistencies between the Proposed Plan/FEIS and state or local plans, policies, and programs following the 60-day Governor's Consistency Review of the Proposed Plan/Final EIS, which was initiated in January 2007 in accordance with planning regulations at 43 CFR Part 1610.3- 2(e).

Consistency of the Proposed Plan with other local, state, tribal, and federal plans and policies was also considered during the planning process. The Approved Plan is consistent with plans and policies of the BLM, other federal agencies, and state and local governments to the extent that the guidance and local plans are also consistent with the purposes, policies, and programs of federal law and regulation applicable to public lands.

PUBLIC INVOLVEMENT

The planning process was initiated when the BLM published the Notice of Intent (NOI) to prepare an EIS on the management plan for the Monument in the *Federal Register* on April 24, 2002. The BLM hosted a series of public open houses in 2002 and 2003 to solicit public comment on the scoping issues and preliminary alternatives for the Draft Plan/EIS. The NOA of the Draft Plan/EIS was published on November 16, 2005. Another series of open house meetings were held to solicit public comment on the Draft Plan/EIS in January of 2006. The NOA for the Proposed Plan/FEIS was published on March 2, 2007, which opened the 30-day public protest period.

Before the NOI was published in 2002, a series of Community Based Partnership and Stewardship courses were held in northern Arizona and southern Utah in which the public provided early information and communication regarding the Monument.

The BLM is committed to providing opportunities for meaningful public participation in the planning process. Throughout the preparation of the Approved Plan, the BLM maintained an extensive public participation process aimed at providing frequent opportunities for interaction with the public through a variety of media. The general public, representatives of Indian Tribes, organizations, public interest groups, and federal, state, and local government agencies were invited to participate throughout the planning process. This participation included review of proposed planning criteria, issues, preliminary alternatives, the Draft Plan/EIS, and the Proposed Plan/FEIS. These groups and individuals were kept informed through public meetings; planning bulletins; web information; *Federal Register* notices; and distribution of preliminary alternatives, the Draft Plan/EIS, and the Proposed Plan/FEIS. The BLM responded to comment letters on the Draft Plan/EIS and considered public comment when preparing the Proposed Plan/FEIS. The BLM also considered protests on the Proposed Plan when developing the Approved Plan and this ROD.

Ten agencies, tribes, and communities requested Cooperating Agency status and assisted with the Arizona Strip planning effort, and included Coconino and Mohave counties, Arizona; Kane and Washington counties, Utah; the towns of Fredonia and Colorado City, Arizona; the Kaibab Paiute Tribe; Arizona Department of Transportation; Arizona Game and Fish Department; and the Federal Highway Administration.

The Arizona Strip District Office also maintained a national mailing list of approximately 10,500 individuals, agencies, interest groups, and tribes who expressed interest in the planning process. The BLM mailed planning bulletins to those on the mailing list or notified those on the email list that the information was available on the Arizona BLM website in order to keep the public informed of project status and to solicit reviews and information. Public meetings were announced at least 15 days prior to the event in local news media and on the website. The BLM participated in numerous meetings with cooperating agencies, other federal agencies, Indian tribes, state and local governments, and interested individuals and groups.

TO OBTAIN A COPY OF THE MANAGEMENT PLAN

Copies of the BLM and NPS RODs and the Grand Canyon-Parashant National Monument Resource Management Plan are available on the Arizona Strip District website at **www.blm.gov/az**, or can be obtained by requesting a copy by telephone at (435) 688-3200 or by email at Arizona_Strip@blm.gov. A copy can also be obtained in person at the following address:

BLM Arizona Strip District Office
345 East Riverside Drive
St. George, Utah 84790

Monument Manager Recommendation

Having considered a full range of alternatives, associated effects, and public input, I recommend adoption and implementation of the Bureau of Land Management decisions in the attached Grand Canyon-Parashant National Monument Resource Management Plan.

Dennis Curtis — January 2, 2008

Dennis Curtis
Monument Manager
Grand Canyon-Parashant National Monument

Date

District Manager Concurrence

I concur with the adoption and implementation of the Bureau of Land Management decisions in the Grand Canyon-Parashant National Monument Resource Management Plan.

Scott R. Florence — January 29, 2008

Scott R. Florence
District Manager
Arizona Strip District

Date

State Director Approval

In consideration of the foregoing, I approve the Bureau of Land Management decisions in the Grand Canyon-Parashant National Monument Resource Management Plan.

Elaine Y. Zielinski — January 29, 2008

Elaine Y. Zielinski
Arizona State Director

Date

U.S. DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE
FINAL ENVIRONMENTAL IMPACT STATEMENT

GENERAL MANAGEMENT PLAN
GRAND CANYON – PARASHANT NATIONAL MONUMENT

RECORD OF DECISION

INTRODUCTION:

Pursuant to the National Environmental Policy Act of 1969 (Public Law 91-190) and Council on Environmental Quality (CEQ) regulations (40 CFR Part 1500), the Department of the Interior, National Park Service (NPS) prepared this Record of Decision (ROD) concerning the Proposed General Management Plan (GMP)/Final Environmental Impact Statement (FEIS) for NPS lands within Grand Canyon-Parashant National Monument, published January 2007 (henceforth, Proposed Plan/FEIS). The Monument is jointly managed by the NPS and the Bureau of Land Management (BLM), which have coordinated extensively throughout the conservation planning and environmental impact analysis process to produce the Proposed Plan/FEIS.

This ROD records the decisions made by the NPS for managing 208,447 acres in Grand Canyon-Parashant National Monument (Monument), as detailed in the Approved GMP. Many of the decisions contained in the Approved GMP apply to both NPS- and BLM-administered lands within the Monument, which will be managed collaboratively by the NPS and BLM. The BLM will produce a separate ROD to record BLM-specific decisions for the Monument. Following the announcement of approval and release of the NPS and BLM RODs, a joint presentation document containing the Approved GMP (NPS) and Approved Plan (BLM) will be prepared (the FEIS will not be reproduced but will be retained as the final record of NEPA compliance completed).

On January 11, 2000, Presidential Proclamation 7265 created Grand Canyon-Parashant National Monument. The President signed the proclamation to ensure protection of a wide variety of scientific, biological, hydrological, and geological resources and a long and rich human history, which have been preserved by remoteness and limited travel corridors. The Monument is a vast landscape, full of natural splendor, where a sense of solitude can be enjoyed. The Monument is located in Mohave County, Arizona, immediately north of Grand Canyon National Park and east of the state of Nevada, and encompasses1,048,316

acres (208,447 acres of NPS-administered federal land, 808,744 acres of BLM-administered federal land, 23,205 acres of state-administered land, and 7,920 acres of private land). The decisions made in this planning process apply only to the federal land (NPS and BLM) within the Monument boundary.

The Approved GMP was described as Alternative E in the Proposed Plan/FEIS, which was initially presented in the Draft Plan/EIS released in November 2005. This ROD provides the background on development of the GMP and the decision rationale for approving the proposed actions contained in Alternative E, and describes the clarifications made to resolve subsequent agency and public comments. This ROD also includes a statement of the decisions made, synopses of other alternatives considered and a description of the environmentally preferable alternative, a summary of actions designed to minimize environmental harm, and an overview of public involvement in the decision-making process.

THE DECISION:

The decision of the NPS is to implement Alternative E as the new GMP for NPS-administered lands located in the Grand Canyon-Parashant National Monument (see Map 1.1 in the FEIS). The NPS-administered lands within the Monument are part of Lake Mead National Recreation Area (NRA). The Approved GMP carries forward relevant decisions from the Lake Mead NRA GMP (1986) with limited modifications to clarify current conditions, remedy recently occurring issues, and/or enhance protection of resource values.

The Approved GMP was prepared in accord with the NPS planning policies contained in Director's Order 2 pertaining to GMPs, the National Park and Recreation Act of 1978, and the NPS Organic Act of 1916. An Environmental Impact Statement (EIS) was prepared in accordance with NEPA and Director's Order 12, Conservation Planning and Environmental Impact Analysis. The Approved GMP is nearly identical to Alternative E presented in the Proposed Plan/FEIS published in February 2007. Minor modifications are noted below.

The Approved GMP emphasizes protection and restoration of natural and cultural resources while still providing for visitor use and enjoyment of the Monument. Where appropriate, it combines various management actions to allow natural processes to continue, applies hands-on treatment methods for restoring degraded resources, and protects remote settings and wilderness character that currently exist in the Monument. All decisions in the Approved GMP fulfill the purpose and significance of the Monument and comply with Presidential Proclamation 7265.

In a comprehensive manner, the Approved GMP is designed to respond to each of the issues and management concerns recognized during the planning process. The NPS determined that the actions presented under Alternative E in the Proposed Plan provide an optimal balance between appropriate and authorized resource use, visitor use and inspiration, and the protection and long-term sustainability of resources/Monument objects and values.

The Approved GMP is comprised of a set of decisions for land management tiered from goal-driven desired future conditions (DFCs), to land use allocations, and on to management actions. These decisions provide management direction at a broad scale and guide future actions to govern the protection and use of the resources on NPS-administered lands of the Monument. Decisions related to the principle planning issues, major resources, and related management addressed by the NPS in the Approved GMP include the following:

Travel management: On the NPS portion of the Monument, decisions regarding the road network approved through the 1986 Lake Mead GMP are carried forward in the Approved GMP. Minor changes were made via the Draft and Proposed Plans and finalized in the Approved GMP to address inconsistencies among earlier plans and to provide enhanced resource protection where needed. Routes open to motorized public use total 121 miles, while routes open for administrative-only motorized use total 27 miles. Routes open for non-motorized public use increased from 5 miles in the Proposed Plan to 8 miles in the Approved GMP due to inclusion of a previously unclassified route in the Andrus Point area.

Proposed wilderness and wilderness characteristics areas: Wilderness proposals and management decisions on NPS lands, established in the 1986 Lake Mead GMP and 1979 Lake Mead Wilderness Proposal, are incorporated in the Approved GMP. While 188,121 acres are, and will continue to be, managed as proposed wilderness, at this time, no Congressionally established wilderness is located on NPS lands. An additional 5,473 acres were inventoried as exhibiting wilderness characteristics during the planning process. Through the Approved GMP, these NPS lands will be managed to retain these characteristics and values by designing any management activities, if necessary to protect resource values of these areas, to be substantially unnoticeable. The "minimum tool" necessary for required projects or actions will be determined in advance, consistent with NPS Management Policies (2006) and Director's Order 41.

Cultural resources and cultural landscapes: Through a program of inventory, monitoring, and research, the NPS will identify, conserve, protect, stabilize or restore, and maintain cultural resources in good (or better) condition to ensure they are conserved and available for appropriate use and enjoyment by present and future generations. Proactive research, protection, and inventories with universities, advocate and service groups, site stewards, tribes, and communities will be used to gain a better understanding of cultural resources for management and protection. Cooperative management agreements may be developed with neighboring federal agencies, local and regional American Indian tribes and communities, institutions of higher learning, and/or other agencies or groups to improve the efficiency and quality of cultural site management.

Imminent threats from deterioration and potential conflicts with other resource uses on NPS lands will be reduced, mitigated, or eliminated. All actions potentially impacting cultural resources will be assessed via compliance with §106 of the National Historic Preservation Act (NHPA) and Director's Order 28. All implementation actions will be

contingent upon the outcome of §106 consultation with the Arizona State Historic Preservation Office (SHPO) and will not proceed until that process is completed.

Tassi Ranch and Waring Ranch will continue to be managed as public use sites. The following implementation actions will occur at Tassi Ranch and Tassi Springs:

- The historic irrigation ditch system will be maintained to allow for conservation of Grand Wash Spring snail, an endemic species.
- Historic landscapes will be managed to maintain historic and ecological integrity.
- The Tassi Ranch cultural landscape will be nominated for listing on the National Register of Historic Places (NRHP).
- A cultural resource cyclic maintenance program will continue.

The following implementation actions will occur at Waring Ranch and Regional Cultural Landscape:

- The Waring Ranch NRHP listing will be broadened to encompass the entire Kelly Point ranching landscape.
- Other features associated with the Kelly Point ranching landscape will be examined and assessed for future stabilizing efforts.
- Condition assessment and stabilization of outlying cultural resources will continue to be conducted.

Traditional cultural properties associated with American Indians whose cultural memory, traditions, and lives are closely associated with the Monument will be protected and potentially nominated to the NRHP. American Indians with cultural and historic ties to the Monument will have access to and use of sites allocated to traditional use, consistent with laws, regulations, and authorities. Tribes with cultural and historic ties to the Monument would be consulted, according to the provisions specified in the Native American Grave Protection and Repatriation Act, Archaeological Resources Protection Act, NHPA, and pertinent Executive Orders. Mutually acceptable methods of protecting and preserving areas of sacred and traditional importance will be adopted.

Geologic resources: Geologic resources, including cave and paleontological resources, will be protected as Monument objects and managed for their scientific, educational, and recreational values. The collection of any objects in the Monument, including geological, paleontological, cave resources, or rock specimens will not be authorized, except by permit for scientific research. All caves on NPS land are classified as significant under the Federal Cave Resources Protection Act. Inventories for cave and karst resources will continue. Cave and karst resources will be evaluated to determine proper and needed protective measures to ensure their continued viability. Protective measures for geologic resources could include restricting surface disturbing activities, limiting some fire suppression techniques, controlling visitor use, and restricting other management actions. NPS lands within the Monument are closed to mineral entry via Proclamation 7265, subject to valid existing rights.

Recreation: Information needed to plan, prepare, and choose safe, enjoyable, and appropriate uses of the Monument will be available to the public. The NPS and BLM will endeavor to provide seamless service to the public and use their resources accordingly. Dispersed, unstructured recreation opportunities predominate on NPS lands and management will focus on visitor safety and resource protection. Opportunities associated with motorized travel for sightseeing, hunting, and other recreation opportunities on NPS lands will be maintained via the network of approved roads. Access to lands with sensitive resources could be closed or limited, where determined necessary through monitoring of resource conditions. Beyond approved roads/road corridors, NPS lands will be managed for wilderness values and wilderness-associated recreation opportunities.

Recreational collecting of Monument resources, such as rocks, mineral specimens, petrified wood, fossils, shed antlers, other animal parts, or plants is prohibited. Recreational shooting is not allowed on NPS lands. Hunting is authorized in accordance with hunting seasons and license requirements established by the Arizona Game and Fish Department.

BLM and NPS permitting processes will be consolidated to provide outfitters and guides with a simplified procedure for obtaining Commercial Use Authorizations/Special Recreation Permits. Annual training will be provided to permit holders concerning appropriate land use ethics, such as *Leave No Trace* and *Tread Lightly*.

A *Limits of Acceptable Change* (LAC) framework will be used to establish acceptable resource, social, and managerial settings/conditions using appropriate indicators and standards. Management responses to unacceptable resource and/or social conditions would range from least restrictive methods (e.g., information and education) to more restrictive (e.g., visitor limits, supplemental rules). Where feasible, the least restrictive methods will be utilized first.

Geocache sites are prohibited in traditional cultural properties, archaeological sites, alcoves, caves, rock shelters, or where identified Monument objects would be at risk; in threatened and endangered species habitat and raptor nesting sites; or where unacceptable impacts may occur. Where geocaches are allowed as an appropriate use by NPS policy, they may remain only so long as acceptable resource and social conditions are maintained.

Environmental education and interpretation: The Monument's interpretation and environmental education program will be grounded in natural and cultural resource themes related to the Monument's purpose, significance, and mission statements as well as NPS and BLM missions and goals. The public will be provided the opportunity to understand and appreciate the purposes and significance of the Monument and its resources for this and future generations.

A Comprehensive Interpretive Plan (CIP) to be completed, creating a long-range vision and basis for decision-making related to interpretation and education for the Monument, will address:

- Interpretive goals, objectives, and associated management actions necessary for interpreting themes to target audiences.
- Interpretive publications that need to be developed for public use, education, and enjoyment.
- Outreach environmental education programs (interactive computer, workshop, and classroom) to be developed to enhance knowledge of natural and cultural resources and promote their stewardship.
- Partnerships with other state agencies, national parks, educational institutions, and other organizations to enrich interpretation and environmental education opportunities.

Information regarding recreation opportunities, interpretation of natural and human history, and specific rules and regulations pertaining to their use of NPS lands, would be provided to visitors. The Interagency Information Center and partnerships with cooperating associations will continue to be used to distribute visitor information to the public. A website will be maintained for on-line inquiries.

Signing in the Monument will be the minimum necessary to provide for public safety, reduce user conflicts, and protect resources; materials and design will be unobtrusive in order to blend with local landscape settings and retain the natural and/or historic integrity of the site. Recreational facility development will feature sustainable designs, and will be limited in sensitive habitats. Any future visitor center or contact stations will be collaborative efforts within nearby communities and will not be located within the Monument. Sensitive areas where increased visitation could create unacceptable changes or impacts to natural or cultural resources will not be publicly promoted. Public information will be provided only for those cultural sites designated for public use.

The Tassi Spring area will be identified, nominated, and managed as a Watchable Wildlife area. The public will be well informed about special status species and their needs for conservation through signs, educational media, and other outreach efforts.

Visual resources: All visual resources identified in the Monument proclamation (e.g., natural splendor; impressive landscapes; engaging scenery; natural splendor; colorful vistas; rugged canyons; colorful, lava-capped strata; and spectacular escarpments) will be protected. A system using four visual resource management (VRM) classes was applied in the planning process for NPS and BLM lands. From analysis in the Proposed Plan/FEIS, all NPS lands in the Monument are categorized in Class 1(192,194 acres) or Class 2 (16,899 acres) in order to provide a very high level of visual resource protection. These classes establish the following objectives, which also provide visual management standards for the design and development of future management activities and projects on NPS lands in the Monument:

- ***Class 1*** - The objective of this class is to preserve the existing character of the landscape. This class provides for natural ecological changes; however, it does not preclude very limited management activity. The level of change of the characteristic landscape should be very low and must not attract attention.
- ***Class 2*** - The objective of this class is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of a casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.

Dark night sky: Overnight conditions as influenced primarily by natural light sources will be maintained. Permanent outdoor lighting in VRM Class I areas will not be allowed. Any facilities authorized will use the best technology available to minimize light emissions and power consumption. Impacts to dark night skies will be prevented or reduced through the application of specific mitigation measures identified in activity level planning, with the appropriate level of NEPA compliance to be approved by the NPS. To provide the minimum, safe illumination necessary, these measures may include directing all light downward, as well as using shielded lights, lamp types such as sodium lamps (less prone to atmospheric scattering), circuit timers, and motion sensors, among other techniques.

Soundscapes: Natural quiet and sounds will be preserved or restored on NPS lands, where practicable. A Soundscape Management Plan will be developed and include baseline inventories and subsequent monitoring. In Air Tour Management planning and other §4(f) consultations with the Federal Aviation Administration, the NPS will recommend the protection and/or restoration of natural quiet. The NPS will continue to evaluate use of motorized equipment on NPS land. When motorized equipment is necessary and appropriate (and traditional skills are impractical to accomplish the necessary work), the least impacting equipment, alternatives, and/or mitigation will be employed.

Vegetation management: Native vegetative communities and species will be protected and managed as Monument objects. A mosaic of native perennial and non-invasive annual vegetative communities will be present across the landscape with a diversity of species, canopy, density, and age class reflecting its local ecological site potential and naturally occurring habitat conditions. Vegetative communities will be managed to provide sufficient plant cover and litter accumulation to protect soils from wind and water erosion and enhance nutrient cycling and productivity, even during drought years. Ecological processes and functions will be protected, enhanced, and/or restored by allowing tools that are necessary and appropriate to mitigate adverse impacts of allowable uses and undesirable disturbances, and contribute to meeting NPS Vital Signs and enhance Monument objects and values.

On NPS lands, vegetation management objectives will be developed through Vital Signs monitoring. Monitoring vegetation communities will demonstrate retention of ecological integrity where natural processes maintain native plants and plant communities and are the

principal influence on vegetation community and population fluctuation. When natural processes have been disrupted, Desired Plant Community (DPC) objectives will be achieved through vegetation treatments and managing resource uses, as appropriate. Seasonal restrictions, temporary reductions, or elimination of authorized activities will be implemented in conjunction with vegetation treatment projects to protect sensitive resources and/or ensure attainment of DPC objectives or Vital Sign standards. Fire is recognized as a natural process in fire-adapted ecosystems and prescribed fire/wildland fire use may be used to achieve objectives for vegetation and other resources.

On NPS lands, individual restoration plans would be developed to meet DPCs, NPS Vital Signs standards, and related ecological objectives. Mitigation measures will be implemented for reducing impacts such as soil erosion or non-native plant encroachment, and minimum requirements analysis will be used in proposed wilderness. Authorization of non-native seed use must be consistent with NPS policy, which states that revegetation efforts will use seeds, cuttings, or transplants representing species and gene pools native to the ecological portion of the park in which the restoration project is occurring. Where a natural area has become so degraded that restoration with native gene pools has proven unsuccessful, NPS policy allows for improved varieties or closely related native species to be used.

The collection or use of vegetative materials from NPS lands will only be authorized in conjunction with documented research or restoration programs in accordance with NPS regulations and policy. The sale of vegetative materials will not be authorized. Salvaged plant materials may be used in areas with similar ecological conditions requiring restoration or rehabilitation. Salvage and use may require a permit from the State of Arizona and will be allowed in the following priority:

- Removal and maintenance for replanting during rehabilitation of the site being disturbed
- Removal and transplanting out of the area to be disturbed to an area needing rehabilitation

On NPS lands, all acres can be considered for Wildland Fire Use, prescribed fire, fire suppression, and mechanical and chemical treatment to achieve resource objectives, consistent with land use allocations in the GMP, in order to protect Monument resource values and wilderness character, except that all Mojave Desert Ecological Zone acres would be managed as Fire Suppression as designated in the Lake Mead Fire Management Plan/EA (NPS 2004). All acres in the Mojave Desert Ecological Zone are available for restoration, involving the strategic application of mechanical and chemical treatment for invasive plant control, endangered species habitat restoration/protection, or to restore more natural fire regimes and fire frequency. All treatments will be consistent with land use allocations and minimum-tool requirements for proposed wilderness. In addition, hazard fuel reduction treatments will be implemented to protect Monument values, infrastructure, personnel, and visitors where appropriate.

Control of non-native invasive species: Implementation of ongoing noxious weed and invasive species control actions will be continued, consistent with NPS policy and the Weed Management Area Plan. Integrated weed management will continue using available tools to control noxious weeds consistent with vegetation management decisions for each

ecological zone to protect resources and Monument values. Certified weed-free feed, mulch, and seed may be required for all permitted uses to limit the spread of noxious weeds and other undesirable species. Construction equipment, fire vehicles, and/or vehicles from outside the Arizona Strip planning area used to implement authorized projects and/or uses will be required to be cleaned (using air, low pressure/high volume, or high pressure water) prior to initiating the project (and will also be cleaned after being used within any infested area).

Wild horses and burros will not be permitted on NPS lands. Exotic and/or non-native wildlife species and/or feral or non-permitted livestock will be immediately eliminated or controlled upon discovery within nine miles of desert bighorn sheep habitat areas to minimize the threat of bighorn exposure to disease. Agents authorized to eliminate exotics/non-natives include NPS and BLM rangers, as well as officials working for the Arizona Game and Fish Department, USDA Wildlife Services, and county and local law enforcement agencies.

Livestock grazing: Livestock use and associated management practices throughout the Monument would be conducted only in a manner consistent with other resource needs and objectives, to ensure that the health of rangeland resources are maintained or improved, and to ensure they are productive for all resource values. Sensitive resources on NPS lands shall not be degraded by livestock grazing and associated management techniques. On NPS lands, livestock grazing is administered within NPS policy, the Monument proclamation, and Lake Mead NRA enabling legislation, and evaluated through the Vital Signs monitoring program. On NPS lands, when appropriate, the implementation of BLM standards and guides may be modified by incorporating NPS Vital Signs standards and monitoring results. Any land health standards applied on NPS lands must be in compliance with NPS Management Policies (2006) to avoid unacceptable impacts.

Grazing on NPS lands continues on six allotments (75,949 acres) under existing permits. Authority for grazing decisions is retained by NPS, with allotment management conducted through an agreement with BLM. One allotment completely on NPS land and the NPS-portion of two others, closed via previous decisions, are reaffirmed in the Approved GMP to be retired in perpetuity (129,853 acres):

- Grazing on the NPS portion of the Parashant Allotment was made unavailable in perpetuity. The allotment boundaries are modified to include only BLM lands.
- The Tassi Allotment on NPS lands was made unavailable in perpetuity for grazing. The allotment boundaries are modified to include only BLM lands.
- Livestock grazing on the Home Ranch Allotment was terminated based on a 1967 written agreement between NPS and the grazing permittee and is therefore unavailable in perpetuity. The allotment no longer exists.

Only cattle and horse grazing, where permitted, will be authorized on NPS lands.

Special status species: The Monument contains a block of remote, contiguous habitat that serves as refugia for populations of special status species, and as such, a goal of no net loss

in the quality or quantity of special status species habitat throughout the Monument is established. Management of discretionary activities in the Monument will be conducted so as to avoid any need to list proposed, candidate, state, NPS or BLM sensitive species, and will include conservation measures and stipulations benefiting special status plant and animal species. Management emphasis and priority will be given to special status species and habitats in conflict resolution. Special status plant and animal species include those that are federally listed, proposed, or candidate species; species for which there is a signed conservation agreement or strategy; all species referenced in AGFD's "Wildlife Species of Concern in Arizona"; and species included on NPS or the Arizona BLM sensitive species lists.

The NPS will continue to cooperate with the U.S. Fish and Wildlife Service (USFWS), AGFD, and BLM to ensure all actions comply with the Endangered Species Act. The NPS will continue to undertake active management programs to inventory, monitor, restore, and maintain listed species, control detrimental non-native species, control any deleterious public use, and re-establish extirpated populations as necessary to maintain the species and their habitats.

On NPS lands, management of special status species, as needed, will be implemented through specific action plans tiered to the Lake Mead Resources Stewardship Plan or the Approved GMP. Planning and implementation will be conducted in collaboration with USFWS, AGFD, BLM, and/or other partners with required expertise, with appropriate NEPA compliance approved by the NPS.

Reintroductions, transplants, and augmentations of special status species populations could be carried out in conformance with NPS policy, and in collaboration with the BLM, AGFD, and the USFWS to:

- Maintain current native species populations, distributions, and genetic diversity;
- Conserve or recover threatened or endangered species; and/or
- Restore or enhance native populations, diversity, or distribution of special status species.

Animal species that may be reintroduced, transplanted, or augmented in historic habitat may include but would not be limited to desert tortoise, chuckwalla, banded Gila monster, relict leopard frog, endemic spring snail, California condor, yellow-billed cuckoo, southwest willow flycatcher, ferruginous hawk, northern goshawk, or western burrowing owl. Any such actions would be based on the best available scientific information and with appropriate advance planning and NEPA compliance, with opportunity for public review, and approved by the NPS.

The NPS will continue to monitor known locations, and inventory and map potential habitat for special status plant and animal populations to ensure protection of these populations and associated habitat or their restoration, as necessary.

No new facilities will be authorized or constructed in listed or proposed special status species habitat. The NPS will further limit or restrict any recreation activity or other use that degrades any special status species habitat or may cause disturbance, injury, or mortality to the species.

Wildlife management: The natural biological diversity of wildlife species will be maintained or, where feasible, restored. Habitats will be managed on an ecosystem basis, ensuring that all parts of the ecosystem and natural processes are functional. Native wildlife communities, species, and habitats are protected as Monument objects. Habitat connectivity and wildlife movement between ecological zones is maintained or enhanced where feasible. Vegetation treatments may be authorized to meet conservation objectives, with appropriate NEPA and minimum tool analyses (if applicable), and approved by the NPS following public review. Predators are recognized as an important component of plant and animal communities. On NPS lands, predator control will only take place in accord with 2006 NPS Management Policies, ensuring that proposed animal removals do not interfere with natural habitats, abundances, distribution of native species, or processes.

On NPS lands, wildlife management will be consistent with AGFD Strategic Plans, to the extent it is compatible with 2006 NPS Management Policies. Reintroductions and transplants of native wildlife species into historic habitats will be authorized where consistent with achieving DFCs, protection of Monument objects, and when compatible with applicable NPS policies.

New water developments for wildlife are not authorized on NPS lands. Existing water developments may be maintained, repaired, or replaced in-kind within NPS policies, but increased development (size, scope, or disturbance) is not permitted. All management actions require compliance with the Monument proclamation and other applicable laws, regulations, and NPS policies, with appropriate NEPA compliance approved by the NPS.

OTHER ALTERNATIVES CONSIDERED:

Five alternatives, including a No Action Alternative, were analyzed in detail in the Draft Plan/EIS (BLM and NPS 2005). The alternatives were developed to address major planning issues identified through public scoping and to provide direction for resource programs. Each alternative was comprised of a set of potential decisions representing a distinct concept for land management tiered from goal-driven DFCs, to land use allocations, and to management actions. These decisions provide management direction at a broad scale and guide future actions to govern the protection and use of the resources on NPS-administered lands on the Monument.

Alternative A - This "no action" alternative provided the baseline against which to compare the other alternatives and continued management provided by the Lake Mead NRA GMP (NPS 1986), the overall tenets of Presidential Proclamation 7265, and the BLM/NPS interim management agreement, which provided temporary direction until the GMP could

be approved. Under **this** alternative, current management practices would have continued, as funding allowed, and as modified with creation of the Monument to ***fulfill*** the direction provided in Proclamation 7265.

Alternative B – This alternative emphasized minimal human use/influence and proposed the fewest miles of open roads and trails. Alternative B focused on natural processes and other unobtrusive methods for ecosystem restoration, resource management, and scientific research; more protection and enhancement of remoteness and dispersed recreation; unstructured recreation opportunities; and the least amount of motorized recreation opportunities.

Alternative C – This alternative represented an attempt to balance resource protection and human use/influence. Alternative C proposed a moderate amount of open roads and trails; a mix of natural processes and "hands-on" techniques for ecosystem restoration, resource management, and scientific research; and a mix of motorized, non-motorized, dispersed, and structured recreation opportunities.

Alternative D – This alternative emphasized maximum appropriate human use/influence and the widest array of visitor experiences and opportunities. Alternative D focused on "hands-on" techniques for ecosystem restoration, resource management, and scientific research. As such, it offered fewer remote settings and the most motorized and structured recreation opportunities compared to the other alternatives.

Alternative E – This alternative emphasized minimal human influence and use in the more remote sections of the Monument and more human use/influence in the areas adjacent to local communities or in areas presently receiving such use/influence. It attempts to balance human use/influence with resource protection. Where appropriate, it proposed the use of a combination of management actions including allowing natural processes to continue, applying more hands-on treatment methods, and protecting the remote settings that currently exist in the Monument.

BASIS FOR DECISION:

Information derived from the initial scoping phase informed development of the alternatives presented in the Draft Plan/EIS. The subsequent public comment and feedback provided through review of the Draft Plan/EIS was duly considered in preparing the Proposed Plan/FEIS. The Proposed Plan/FEIS depicted a combination of decisions from the five alternatives considered in the Draft Plan/EIS, emphasizing the Preferred Alternative (Alternative E).

The course of actions for managing the NPS lands of the Monument encompassed in Alternative E was chosen because it (a) most effectively accomplishes the overall objectives of protecting Monument resources and values and facilitates appropriate management and research; (b) best addresses the diverse stakeholder concerns in a fair and equitable manner; and (c) provides the most workable framework for future management of the Monument. Among the attributes that led to this determination are

provisions for protecting Monument resources (archaeological, historic, paleontological, geological, biological) including special features such as special status species, wilderness character, riparian areas, and cultural landscapes, and provides for visitor use in a manner consistent with protecting Monument resources and values from any potential impairment.

The Approved GMP responds to increasing demands for recreation on NPS-administered lands while adhering to NPS Organic Act mandates for resource protection and visitor use management. The Approved GMP is very similar to the Proposed Plan with minor revisions and clarifications stemming from public and agency comment and internal review.

The Approved GMP responds to travel management and access issues by designating routes as open, closed, or for administrative use only. A Travel Management Plan for the Monument, including NPS and BLM lands, will be completed within three years from the date of this ROD.

ENVIRONMENTALLY PREFERRED ALTERNATIVE:

Alternative E of the Proposed Plan/FEIS was identified by the NPS as the environmentally preferred alternative when taking into consideration the human (social and economic) environment as well as the natural environment. The CEQ has defined the environmentally preferable alternative as the alternative that will promote the national environmental policy as expressed in §101 of NEPA. The six broad policy goals for all Federal plans, programs, and policies are listed below:

1. Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations.
2. Assure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings.
3. Attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences.
4. Preserve important historic, cultural, and natural aspects of our national heritage, and maintain, wherever possible, an environment that supports diversity and variety of individual choice.
5. Achieve a balance between population and resource use that will permit high standards of living and a wide sharing of life's amenities.
6. Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

In comparison with the other alternatives analyzed in the Proposed Plan/FEIS, Alternative E best meets the above NEPA goals for the future management of the Monument. It provides a high level of protection of natural and cultural resources, while providing for a

wide range of beneficial uses of the environment. Alternative A (No Action) would have allowed unmanaged visitor use increases, thereby causing potential negative impacts on the visitor experience and resource conditions. This alternative also did not identify additional lands managed to maintain wilderness characteristics. For these reasons, the No Action alternative is not preferable from an environmental perspective.

Alternative B encompassed the most "hands off" management. It has the fewest miles of open motorized routes, more acres of NPS lands managed to maintain wilderness characteristics than Alternatives A, C and D, and the least aggressive forms of treatment for noxious and invasive species. Though this alternative is the most "natural" management alternative, it does not provide for proactive visitor or resource management. This alternative was not deemed the environmentally preferable alternative because it does not achieve a balance between visitor use/access and protection of resources, nor does it involve restoration of natural processes and conditions.

Alternative C most balanced visitor use and resource conditions, but did not recognize the unique nature of the Monument in terms of its accessibility and opportunities to provide a range of appropriate recreational experiences to Monument visitors. This alternative does not attain the widest range of beneficial uses of the environment without degradation.

Alternative D encompassed the most "hands-on" management, maximum human use/influence, most recreation opportunities, and among the "action" alternatives the fewest acres managed to maintain wilderness characteristics. This alternative proposed extensive proactive restoration of species, which meant fewer acres restored via natural means, and more significant alterations to the primitive landscape. It provided a high range of visitor access and recreation opportunities, but fewer opportunities for primitive and remote experiences. For these reasons, this alternative did not achieve the balance between resource protection and resource use that permitted enhancement of resource conditions and visitor experience.

Alternative E (now the Approved GMP) combines the best components of each of the above "action" alternatives to ensure protection of Monument resources and values while providing a wide range of beneficial uses. This alternative acknowledges that the more isolated areas of the Monument will be managed to preserve their remoteness and contains the most acres of NPS lands managed to maintain wilderness characteristics. At the same time, it provides appropriate access to areas of higher use and along major travel corridors to ensure that a range of appropriate outdoor recreation is available. Overall, Alternative E best meets the requirements of §101 of NEPA and was thus identified as the environmentally preferable alternative by the NPS.

FINDING ON IMPAIRMENT OF PARK RESOURCES AND VALUES:

In addition to determining the foreseeable environmental consequences of the alternatives, NPS policy (NPS 2006 Management Policies, §1.4) requires that potential effects be analyzed by the NPS manager to determine if a proposed action could impair the resources or values of the NPS unit, "*including the opportunities that otherwise would be present for*

the enjoyment of those resources or values." Impairment analysis is required only for the NPS portion of the Monument, and is determined only by NPS managers. When there is a potential for impairment, it must be disclosed, and the components of any such alternative leading to the impairment must be modified or eliminated before a decision can be made.

The fundamental purpose of the NPS, established by the NPS Organic Act and reaffirmed by the NPS General Authorities Act, as amended, begins with a mandate to conserve resources and values. NPS managers always must seek ways to avoid or minimize adverse impacts on the resources and values to the greatest degree practicable. However, the laws do give the NPS manager discretion to allow impacts on the resources and values when necessary and appropriate to fulfill the purposes of a unit (in this case, a National Monument), as long as the impact does not constitute impairment of the affected resources and values. Although Congress has given the NPS this management discretion, that discretion is limited by the statutory requirement that the NPS must leave the resources and values unimpaired unless a particular law directly and specifically provides otherwise.

Impairment prohibited by the Organic Act and the General Authorities Act is an impact that, in the professional judgment of the responsible NPS manager, would harm the integrity of park resources or values, including opportunities that otherwise would be present for the enjoyment of those resources or values. Whether an impact meets this definition depends on the particular resources and values that would be affected; the severity, duration, and timing of the impacts; the direct and indirect effects of the impacts; and the cumulative effects of the impact in question and other impacts. An impact on any resource or value may constitute an impairment, and would be most likely to constitute an impairment if it affects a resource or value whose conservation is:

a) Necessary to fulfill specific purposes identified in the establishing legislation or Monument proclamation,
b) Key to the natural or cultural integrity of the Monument or to opportunities for enjoyment of the Monument, or
c) Identified as a goal in the Monument's GMP or other relevant NPS planning documents.

An impact would be less likely to constitute an impairment to the extent that it is an unavoidable result, which cannot be reasonably further mitigated, or an action necessary to preserve or restore the integrity of Monument resources or values. Impairment could result from visitor activities, park management activities or activities undertaken by permittees, contractors, or others operating in the park, as well as from external actions. Impairment can occur from inaction as well as action. For example, failure to prevent the spread of seriously disruptive invasive species may impair park resources.

The NPS has determined that implementing Alternative E as the Approved GMP will not result in impairment of Monument resources and values, nor are any unacceptable impacts expected to occur. In reaching this determination, Monument Proclamation 7625, Lake Mead NRA enabling legislation (Public Law 88-639), and the 1986 Lake Mead NRA GMP were reviewed to ascertain the Monument's purpose and significance, resource values,

resource management goals, and DFCs. In addition, the management objectives specific to resource protection goals on NPS lands of the Monument were identified; thresholds were established for each resource of concern to determine the context, intensity, and duration of impacts; and an analysis was conducted to determine if the magnitude of the impact reached the level of impairment defined in NPS Management Policies (2006).

Based on a thorough analysis of the environmental impacts described in the Proposed Plan/FEIS, the public and agency comments received, and the application of the provisions of the 2006 NPS Management Policies, the NPS has concluded that the implementation of the Proposed Plan (Alternative E) would not result in impairment of any of the resources and values on NPS lands of Grand Canyon-Parashant National Monument.

MONITORING AND MEASURES TO MINIMIZE ENVIRONMENTAL HARM:

Mitigation measures to avoid or minimize environmental harm that could result from implementing the selected action are described and analyzed in the Proposed Plan/FEIS, and are incorporated into the Approved GMP. Measures to minimize environmental harm include, but are not limited to openings/closures of motorized routes; ranger law enforcement patrols; commercial use authorization stipulations; visitor education regarding appropriate use/activities; grazing permit requirements; erosion control measures; restoration of habitats using native species; exotic plant and animal control; use of minimum tool and traditional skills as necessary to protect wilderness character; erecting barriers or signs to reduce or prevent impacts; use of weed free materials and equipment; monitoring visitor use patterns; monitoring changes in condition of natural and cultural resources; and consulting with the Arizona SHPO, USFWS, other state and federal agencies, and interested Tribes when appropriate.

During the anticipated 15-20 year life of the Approved GMP, the NPS expects that new information gathered from field inventories and assessments, research, suitable agency studies, and other sources will update baseline data or support new management techniques and scientific principles. To the extent that such new information or actions address issues covered in the GMP, the NPS will integrate the data into project management and activity planning. Monitoring, which is the repeated measurement of activities and conditions over time with the implied purpose to use this information to adjust management, if necessary, will be used to achieve or maintain resource objectives. Director's Order 12 (and CEQ regulations implementing NEPA) provides that the NPS will ensure appropriate monitoring is undertaken to ensure approved actions and mitigation strategies are carried out and achieve desired outcomes.

Monitoring information facilitates an adaptive management strategy. As part of this process, the NPS will review management actions periodically to determine whether the objectives of the Approved GMP are being met (a detailed discussion of implementation and use of adaptive management are included in the Approved GMP).

The NPS will monitor the effectiveness of the Approved GMP to determine whether the DFCs, goals, and objectives set forth in this document are being met (see the discussion entitled "Monitoring" in Chapter 3 of the Approved GMP). Monitoring for each program area is outlined in Table 3.1 of the Approved GMP. If monitoring shows current resource management actions or visitor management practices are not effective, the NPS may modify or adjust management without amending or revising the GMP as long as assumptions and impacts disclosed in the analysis remain valid and broad scale DFCs, goals, and objectives are not changed (see the discussion entitled "Adaptive Management" in Chapter 3 of the Approved GMP). Where the NPS considers taking or approving actions that will alter or not conform to overall direction of the GMP, the NPS will prepare a plan amendment or revision and complete NEPA compliance, as appropriate.

PUBLIC ENGAGEMENT AND AGENCY COORDINATION:

The conservation planning and environmental impact analysis process was formally initiated when the NPS published the Notice of Intent (NOI) to prepare an EIS for a GMP in the *Federal Register* on April 24, 2002. Subsequently the NPS and BLM facilitated a series of public open houses in 2002 and 2003. Before the NOI was published, a series of Community Based Partnership and Stewardship courses were held in northern Arizona and southern Utah in which the public provided early information and communicated issues regarding the Monument.

The Notice of Availability (NOA) of the Draft Plan/EIS was published on November 25, 2005 and the jointly prepared document was available for a 90-day public review period. Another series of open house meetings were held in St. George, Utah; Beaver Dam, Kingman, Flagstaff, Marble Canyon, Kaibab Village, Page, and Phoenix, Arizona; and Las Vegas, Nevada, to discuss the Draft Plan/EIS and solicit public comment.

The NOA for the Proposed Plan/FEIS was published on March 2, 2007. Throughout the preparation of the Approved GMP, the NPS maintained an extensive public participation process aimed at providing frequent opportunities for interaction with the public through a variety of media. The general public; representatives of Indian Tribes; organizations; public interest groups; and Federal, state, and local government agencies were invited to participate throughout the planning process. This participation included review of proposed planning criteria, issues, preliminary alternatives, the Draft Plan/EIS, and the Proposed Plan/FEIS. These groups and individuals were kept informed through public meetings; planning bulletins; web information; Federal Register notices; and distribution of preliminary alternatives, the Draft Plan/EIS, and the Proposed Plan/FEIS. The NPS responded to comment letters on the Draft Plan/EIS and carefully considered public comment when preparing the Proposed Plan/FEIS. The NPS also considered comments on the Proposed Plan/FEIS when developing the Approved GMP and this ROD.

Ten agencies, tribes, and communities requested cooperating agency status and assisted with the planning effort and included Coconino and Mohave counties, Arizona; Kane and Washington counties, Utah; the towns of Fredonia and Colorado City, Arizona; the Kaibab

Paiute Tribe; Arizona Department of Transportation; AGFD; and the Federal Highway Administration.

A national mailing list of approximately 10,500 individuals, agencies, interest groups, and Tribes who expressed interest in the planning process was maintained throughout the planning process. In order to keep the public informed of planning status and to solicit reviews and information, planning bulletins were issued to those on the mailing list via direct mail, or if preferred via e-mail notification (when information was available on the website). Public meetings were announced at least 15 days prior to the event in local news media and on the website. The NPS and BLM conducted numerous meetings with cooperating agencies, other Federal agencies, Indian Tribes, state and local governments, and interested individuals and groups.

CONCLUSION:

The Preferred Alternative (Alternative E) of the Proposed Plan/FEIS, which was selected as the Approved General Management Plan, provides the most comprehensive and proactive strategy among the full range of alternatives considered for meeting the National Park Service's purposes, goals, and criteria for managing NPS lands in Grand Canyon-Parashant National Monument in accordance with Proclamation 7265, federal laws, and 2006 NPS Management Policies. As noted, the Approved GMP has been finalized based on public comment and agency consultations. The selection of Alternative E, as reflected by the analysis contained in the Proposed Plan/FEIS, will not result in the impairment of Monument resources and allows the NPS to conserve such resources while providing for their enjoyment by visitors.

Approved: Jonathan B. Jarvis

Jonathan B. Jarvis, Regional Director
Pacific West Region, National Park Service

Date: 1/31/2008

Chapter 1



Arizona Strip: Where the West Stays Wild

CHAPTER 1: INTRODUCTION

PURPOSE AND NEED

Grand Canyon-Parashant National Monument (referred to as the "Monument" throughout this document) was established on January 11, 2000, when President William J. Clinton issued Presidential Proclamation 7265 (Appendix A) under the Antiquities Act of 1906 (34 Stat. 225, 16 U.S. Code [USC] 431). The Monument was created to protect an array of scientific, biological, geological, hydrological, cultural, and historical objects. These objects, both individually and collectively, in the context of the natural environments that support and protect them, are referred to as "Monument objects," "Monument resources," or "Monument values" throughout this document.

Grand Canyon-Parashant National Monument is located on public lands administered by the Bureau of Land Management (BLM) and the National Park Service (NPS). Local jurisdiction for BLM lands in the Monument resides with the Arizona Strip District of the BLM, while local jurisdiction for the NPS portion of the Monument resides with Lake Mead National Recreation Area (NRA). The proclamation keeps the Monument under existing BLM and NPS management and authorities, but subjects them to the primary purpose of protecting the Monument objects as described in the proclamations.

The designation of Grand Canyon-Parashant National Monument changed much of the management direction of the existing Arizona Strip District Resource Management Plan (RMP; BLM 1992) and the Shivwits Plateau portion of the Lake Mead General Management Plan (GMP; NPS 1986). An individual management plan was needed to protect Monument objects and the context that supports them, in a way that was consistent with Presidential Proclamation 7265. This management plan, the Grand Canyon-Parashant National Monument RMP and GMP (Approved Plan), is necessary to guide management actions for the Monument by providing a set of decisions outlining management and creating a framework for future planning and decision making. Due to Presidential Proclamation 7265's cooperative administration mandate, this Approved Plan has been developed under a joint effort by the Arizona Strip District (BLM) and Lake Mead NRA (NPS).

Presidential Proclamation 7265 is the principal direction for management of the Monument. It clearly dictates that the BLM and NPS manage the Monument for "the purposes of protecting the objects identified." All other considerations are secondary to that edict.

The Monument proclamation governs how the provisions of the Federal Land Policy and Management Act (FLPMA) of 1976 and the Organic Act of 1916 will be applied within the Monument. The proclamation, FLPMA, the Organic Act, the National Environmental Policy Act (NEPA) of 1969, and other mandates provide direction for the preparation of a management

plan for the Monument. Within this guidance, many decisions remain about how best to protect Monument resources and address the major issues surrounding Monument management. Presidential Proclamation 7265 directed the Secretary of the Interior to prepare a plan in order to begin making those decisions. This Approved Plan fulfills that directive by guiding management activities within the Monument and providing for the protection of Monument resources. It proposes to do so in a manner that creates opportunities for public discovery and education, sets a precedent for progressive public land stewardship, incorporates input from the scientific community and the public at large, and reflects the national significance of these resources.

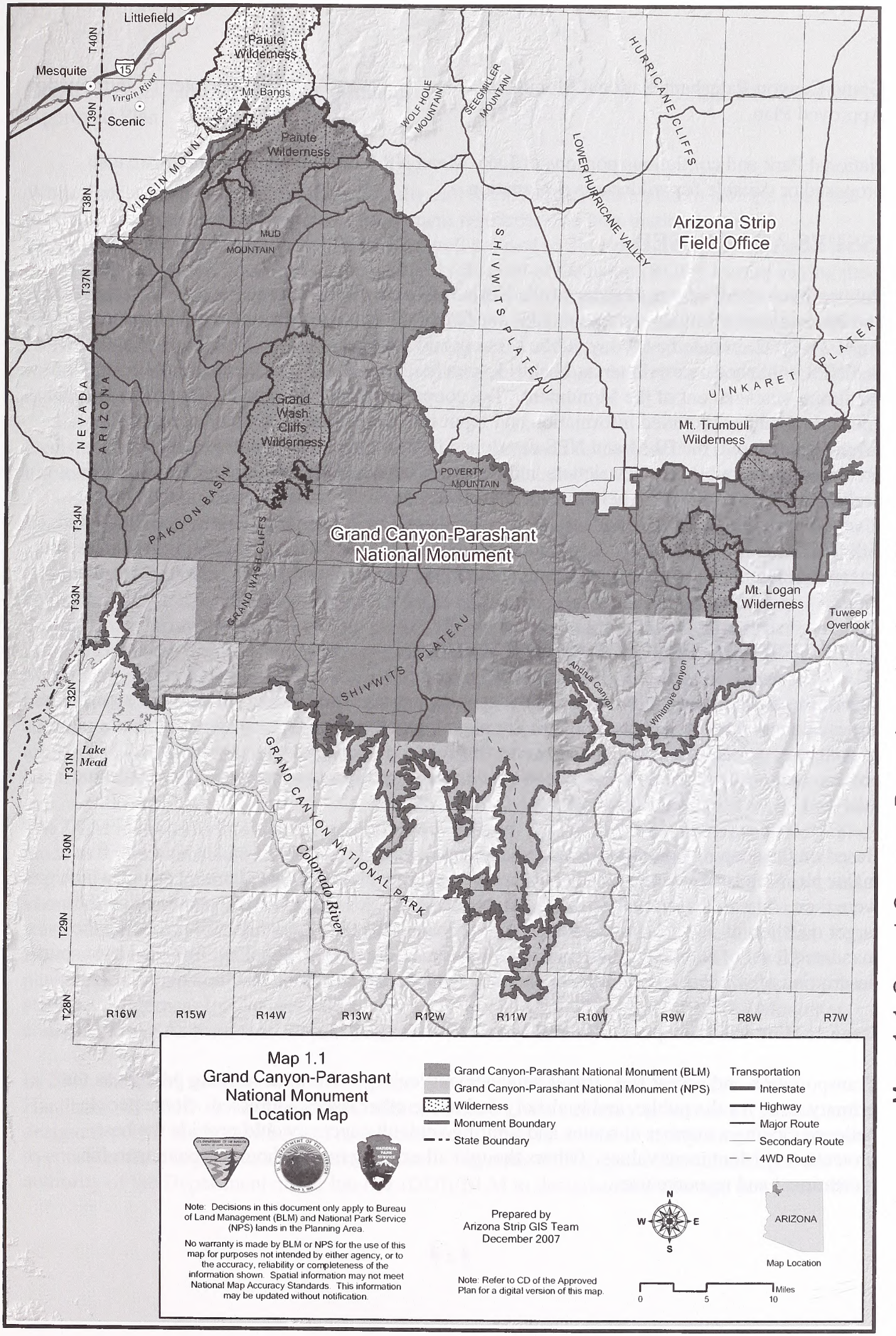
As mentioned above, the purpose of this Approved Plan is to provide both a set of decisions outlining management direction and to create a framework for future planning and decision making. Its scope is necessarily broad since it is a general framework document that will guide the overall management of activities within the Monument, as well as the use and protection of Monument resources. As in the case of any management plan, it is expected that there will be a future need for subsequent and more detailed planning, which will focus on specific geographic areas or management issues. Further NEPA documents will be written to analyze and implement decisions that are not fully addressed in this Approved Plan. In each subsequent activity plan and NEPA document, the BLM and NPS will include a description of the desired future conditions of the land, resources involved, analysis of potential impacts, and an explanation regarding how the proposed activities, as well as reasonable alternatives, would contribute to attaining those conditions.

PLANNING AREA AND MAP

Grand Canyon-Parashant National Monument encompasses 1,048,316 acres in Mohave County: 808,744 acres of BLM-administered lands, 208,447 acres of NPS-administered lands, 23,205 acres of Arizona State Trust lands, and 7,920 acres of private lands. This Approved Plan includes decisions only for BLM- and NPS-administered lands in the Monument, which are depicted on Map 1.1. There are no communities within the Monument, with the nearest being Littlefield, Beaver Dam, Scenic, Fredonia, Colorado City, and Centennial, Arizona; Mesquite and Bunkerville, Nevada; and St. George, Utah.

The vast chasm of the Grand Canyon essentially prevents travel to the Monument from the south, and only unpaved roads provide entry from the north, west, and northeast. The Monument offers spectacular scenic vistas, numerous rough canyons, isolated stands of ponderosa pines, expanses of pinyon/juniper woodlands, and Mojave Desert. Within these environs, visitors can participate in a wide array of dispersed recreation activities that offer opportunities for experiencing remoteness and solitude, a sense of discovery, learning, and adventure.

Congress designated 95,109 acres of BLM lands within the Monument as wilderness in 1984. In addition, 190,479 acres of NPS lands are proposed as wilderness areas. Most of Grand Canyon



Map 1.1 Grand Canyon-Parashant National Monument Location Map

National Park and contiguous portions of Lake Mead NRA outside the Monument are also proposed or suitable for wilderness designation.

ISSUES ADDRESSED

Publication in the *Federal Register* of the Notice of Intent (NOI) to prepare a management plan and environmental impact statement (EIS) for Grand Canyon-Parashant National Monument on April 24, 2002, initiated a 90-day public scoping and comment period. Following this, the BLM and NPS published a newsletter and held 11 open houses in 2002 to encourage public input on the future management of the Monument. Ten cooperating agencies and a dozen other Federal and state agencies provided information and input into development of this Approved Plan. From all this input, the BLM and NPS developed four conceptual alternatives that were presented to the public via newsletters and five open houses. These public meetings for the preliminary alternative were held in 2003. A 90-day public comment period on the Draft Plan/EIS was initiated on December 16, 2005, followed by release of the Proposed Plan/Final EIS (FEIS) on March 2, 2007. Information from these meetings, the Cooperating Agencies and interested state and Federal agencies, and the public was then used to develop this Approved Plan.

ISSUES USED TO DEVELOP ALTERNATIVES

One of the most important outcomes of the scoping process was the identification of significant issues addressed in the Approved Plan. For planning purposes, an "issue" is defined as a matter of controversy, dispute, or general concern over resource management activities, the environment, or land uses. In essence, issues help determine what decisions were made and analyzed in the Proposed Plan/FEIS.

Based on the scoping comments received and their subsequent analysis and evaluation, five major planning issues were identified as being within the scope of this planning effort, which were then addressed and analyzed in the associated EIS. All of these issues centered on the larger question of just how much human activity should be allowed while still providing the mandated level of resource protection. The five issues are presented below, followed by a short description of why each is significant and the management decisions that they required.

Issue 1: How will transportation and access be managed?

Transportation and access (i.e., travel management) emerged from the scoping process as the primary issue for the public, and is closely tied to the other issues addressed. Some people believed closing a number of routes and limiting vehicular access would provide the best protection of Monument values. Others thought all existing routes should remain open for recreational and resource uses.

While Proclamation 7265 did not specifically call for a transportation plan to address road and needed travel management to protect Monument resources, the information on travel management presented in this Approved Plan will be used to develop a transportation plan for the Monument within three to five years after the Record of Decision (ROD) accompanying this Approved Plan has been signed. An authorized road system for NPS lands in the Monument was designated in the Lake Mead NRA GMP (NPS 1986) and is not readdressed in this Approved Plan, except to attend to inconsistencies in existing plans and to provide for resource protection. Route inventories of the Monument were completed and used as baseline data for trail and travel management planning

Decisions about restricting or improving access are addressed in Chapter 2. Travel management implementation decisions and associated maps are also detailed in Chapter 2.

Issue 2: How will areas with wilderness characteristics be managed?

A number of individuals and groups voiced their concern for protecting areas with wilderness characteristics in the Monument. Many brought up the concept of additional wilderness designations during the public scoping period. Some felt that additional wilderness designations in the Monument would be the best way to protect resources, particularly those identified in the Monument proclamations. Others were not in favor of additional wilderness designations because they felt such actions would prevent the majority of visitors from accessing the remote sections of the Monument, especially those that enjoy motorized forms of recreation. Such arguments, however, are outside the scope of the EIS for this Approved Plan as only Congress has the authority to designate new wilderness areas.

The BLM historically has had the authority to inventory, assess, and recommend suitable public lands as wilderness study areas (WSAs); however, recent guidance clarified that this authority expired in 1991. With the passage of FLPMA in 1976, the BLM had 15 years to inventory and identify lands suitable for designation as wilderness by Congress. That inventory and review was completed in 1991 and submitted to Congress in 1993. Many of the WSAs identified Bureau-wide are still managed today under an Interim Management Policy (IMP). With the passage of the Arizona Wilderness Act of 1984, any WSAs in Arizona not included as part of a statutory wilderness by Congress were "released" by Congress from the IMP. The Monument contains no WSAs from that 15-year period.

In 2001, the BLM issued new policies in the Wilderness Inventory and Study Procedure Handbook (H-6310-1). The handbook reiterated the BLM's authority to inventory, assess, and designate public lands as WSAs. These lands would then be available at any time for Congress to consider for designation as wilderness areas. The state of Utah and others challenged the authority of the Department of the Interior (DOI)/BLM to designate and manage new (post 1993)

WSAs as wildernesses, arguing that the BLM completed the wilderness suitability process for public lands with the submission of recommendations to Congress in 1993. In the ensuing Utah Wilderness Settlement (April 2003), the DOI/BLM agreed that FLPMA does not allow identification or protection of new WSAs after 1993. In 2003, the BLM formally rescinded the Wilderness Inventory and Study Procedures Handbook. Therefore, in this planning process, additional BLM lands cannot be considered or recommended for designation as WSAs.

In September 2003, the BLM provided new guidance in Instruction Memorandum (IM) 2003-274 and IM 2003-275, Change 1. Specifically, IM 2003-274, Implementation of the Settlement of Utah v. Norton Regarding Wilderness Study, applied the terms of the Utah Wilderness Settlement Bureau-wide. Additionally, IM 2003-275, Change 1, Consideration of Wilderness Characteristics in Land Use Plans, provides guidance for planners and the public for assessing areas that may exist in essentially natural condition, or landscapes where the opportunities to experience solitude or engage in primitive and unconfined recreation may be outstanding. IM 2003-275, Change 1, also provides guidance for making decisions about maintaining these values where they are reasonably present or have sufficient value and need, and are practical to manage. The "non-impairment standard" of FLPMA Section 603 and the BLM IMP for WSAs are not applied as measures to protect naturalness, solitude, and primitive recreation. Such decisions are discussed under the management alternatives in Chapter 2.

This new guidance for BLM wilderness does not affect NPS proposed wilderness within the Monument. For those lands, the 1979 Lake Mead NRA wilderness proposal was brought forward as the decision of record and was not readdressed in the EIS. However, NPS has adopted the BLM's approach to assess additional areas on NPS lands within the Monument that exist in essentially natural condition and provide outstanding opportunities for solitude and primitive and unconfined recreation (outside of proposed wilderness).

Issue 3: How will Monument resources be protected?

The proclamation designating the Monument identified an array of scientific, natural, and historic objects to be protected. There are various ways of achieving this mandate, including maintenance of acceptable existing conditions, educating visitors, restricting access, setting research priorities, and restoring degraded environmental conditions. Decisions about which approaches were used are detailed in Chapter 2.

Issue 4: How will livestock grazing on the Monument be addressed?

The Monument proclamation states that laws, regulations, and policies followed by the BLM in issuing and administering livestock grazing permits or leases on all lands under its jurisdiction shall continue to apply with regard to the lands in the Monument. Presidential Proclamation

7265 also states that BLM shall continue to issue and administer grazing leases within the NPS portion of the Monument, consistent with the Lake Mead NRA enabling legislation.

The scoping process identified livestock grazing as an issue for a number of people. Comments ranged from eliminating all livestock grazing in the Monument to supporting all grazing activities. Those in the middle supported eliminating livestock grazing only in environmentally sensitive areas.

All land uses, including livestock grazing, were incorporated into the concept of overall environmental health. Modifications to current grazing systems, including forage reserves, are detailed in Chapter 2.

Issue 5: How will people's recreation activities be managed?

Lands in the Monument are used for a variety of recreational activities, including exploring, sightseeing, hiking, backpacking, camping, hunting, off-highway vehicle use on designated routes, and mountain bike riding. Given growth projections for communities in the southwestern U.S. and the increased participation of people in recreation pursuits on public lands over time, ineffective management of visitor activities is recognized as potentially having profound environmental effects on Monument lands. These possible effects, along with potential user conflicts, make appropriate management of these activities crucial to protecting Monument resources.

During the scoping process, the public frequently referred to the important relationship between the remoteness of the Monument and the quality of visitor experiences. The Special Recreation Management Areas (SRMAs) and Recreation Management Zones (RMZs) in Chapter 2 of the Approved Plan detail how land managers decided where and what types of recreation-tourism markets should be targeted for more structured types of recreation opportunities. They also decided what kinds of custodial management are needed for unstructured, dispersed recreation found in the Extensive Recreation Management Areas (ERMAs).

Decisions, such as where and what kind of interpretation and signage to provide, how to minimize potential user conflicts, and what types of recreation settings should be maintained in specific areas, are important elements addressed in Chapter 2. For identified markets, Chapter 2 includes more specific decisions for various recreation management zones that address maintaining or enhancing the public benefits, experiences, and activities and settings each zone provides.

ISSUES ADDRESSED IN OTHER PARTS OF THE EIS

In addition to the five issues identified during public scoping, the planning team identified two management concerns that also need to be addressed regarding restoration of degraded ecosystems and consideration of the local communities and human use in the Monument. These concerns are presented below, followed by a short description of why each is significant and the management decisions that support them.

Management concern 1: How will degraded ecosystems be restored?

Restoration of degraded ecosystems is an important management concern. Disruption of the natural fire regime has caused the degradation of ecosystems within the Monument (e.g., grasslands are being overrun by shrubs and ponderosa pine forests are unnaturally dense). The use of such techniques as mechanized thinning and prescribed fire can help restore degraded ecosystems. The actions to assist in restoring these degraded ecosystems are detailed in Chapter 2 and the possible vegetation treatment tools and methods are described in Appendix F.

Management concern 2: How will the human factors in the Monument be considered?

While the focus of management plans is on the area's natural and cultural resources and on the uses of these resources, the human or social factors must also be considered. While there are no communities within the Monument, some small communities close to the Monument are dependent upon public lands for deriving certain economic, personal, family, community, and environmental benefits. These communities include Littlefield, Beaver Dam, Scenic, Fredonia, Colorado City, and Centennial, Arizona; Mesquite and Bunkerville, Nevada; and St. George, Utah.

Public safety is also a concern. Sections in Chapter 2 on health and safety; recreation; and air, soil, and water detail proposed management approaches to assist with public safety.

Rapid population growth on private lands in the region will also affect the natural and cultural resources and future uses of the Monument. Decisions in Chapter 2 address actions necessary to maintain or protect the resources and uses in the Monument. Monitoring and adaptive management will assist the BLM and NPS in modifying some uses, if conditions exceed acceptable levels. Decisions about which management approaches will be used in the Monument are detailed in Chapter 2.

ISSUES CONSIDERED BUT NOT FURTHER ANALYZED

While all issues identified during the public scoping process were considered by the BLM and NPS, not all were further analyzed. These include issues that were beyond the scope of the EIS, mainly because they did not meet the purpose and need of the Approved Plan. Other issues are

not further analyzed in this Approved Plan because they are addressed through administrative or policy action.

Issues Beyond the Scope of the EIS

The Council on Environmental Quality (CEQ) guidelines for implementing NEPA require Federal agencies to analyze all "reasonable" alternatives that substantially meet the purpose and need for this Approved Plan. The purpose of the Approved Plan is to provide for management of Grand Canyon-Parashant National Monument within the provisions of the proclamation and to meet the requirements of FLPMA, the NPS Organic Act, and other laws and regulations. Because the Monument proclamation states that certain uses will not continue and other uses will continue, consistent with Federal laws and regulations, actions not complying with the proclamation do not meet the purpose and need for this Approved Plan and were, therefore, not included in alternatives that were analyzed during the planning process.

The following specific alternatives, or actions that could be components of alternatives, were suggested but not analyzed or carried forward because they did not fulfill the requirements and needs of this Approved Plan.

Recommendations for BLM Wilderness Study Areas

The Arizona Wilderness Coalition and members of the public provided recommendations on WSAs in the Monument. In addition, the planning team was working toward making recommendations for WSAs early in the planning process. However, guidance clarified that the BLM's authority to designate WSAs expired in 1993, resulting in the termination in any attempts to designate new WSAs. The BLM and NPS have, however, assessed wilderness characteristics (naturalness, solitude, and primitive recreation) on BLM and NPS lands in the Monument and proposed management actions regarding where, how, and to what extent these characteristics may be managed under Alternatives B, C, D, and E in the Proposed Plan/FEIS.

The Arizona Wilderness Coalition also provided comments and proposed management prescriptions on areas managed to maintain wilderness characteristics. Including this information for these prescriptions would be contrary to BLM policy as outlined in BLM IM 2003-274 and IM 2003-275 and more recent guidance in IM AZ-2005-007 (guidelines for achieving consistency in ongoing and future Arizona Land Use Planning efforts).

National Park Service proposed wilderness within the Monument is not affected by the recent BLM guidance regarding WSAs, and no additional NPS lands have been proposed for wilderness in this document (see Chapter 2). However, as stated above, the NPS has assessed its remaining lands in the Monument for wilderness characteristics.

No Livestock Grazing in the Monument

Presidential Proclamation 7265 states:

> The BLM shall continue to issue and administer grazing leases within the portion of the Monument within the Lake Mead NRA, consistent with the Lake Mead NRA authorizing legislation. Laws, regulations, and policies followed by the BLM in issuing and administering grazing leases on all lands under its jurisdiction shall continue to apply to the remaining portion of the monument.

Based on this proclamation provisions, a no-livestock grazing alternative would not meet the purpose and need of this Approved Plan, nor would it meet BLM's principle of multiple use and sustained yield (FLPMA Sec. 302 (a), see also FLPMA Sec. 102(7)) or provisions of the Taylor Grazing Act.

No Routes in the Monument

Some public comments proposed closing all routes in the Monument to protect Monument objects. The Monument proclamation noted that "outstanding biological objects have been preserved by remoteness and limited travel corridors," and recognized that "because of [archaeological sites'] remoteness and lack of easy road access, the sites have experienced relatively little vandalism." The Secretary of Interior was thus able to recommend these areas for Monument designation because of the remoteness, lack of easy road access, and condition of the resources to be protected. Closing all routes in the Monument is thus not vital to protect Monument resources. The need for access by the public and those holding valid existing rights and other existing authorizations further made the decision to close all roads unreasonable.

PLANNING CRITERIA/LEGISLATIVE CONSTRAINTS

Bureau of Land Management planning regulations (43 Code of Federal Regulations [CFR] 1610) require preparation of planning criteria to guide development of all RMPs. Planning criteria provide the principles that guide and direct the development of the Approved Plan and influence all aspects of the planning process, including inventory and data collection, alternative development, and impact analysis, as well as the selection of a preferred alternative, followed by the selection of the Proposed Plan and the final selection of the Approved Plan. In effect, planning criteria ensure the tailoring of plans to the identified issues and the avoidance of unnecessary data collection and analysis. The basis of determining planning criteria includes applicable laws, agency guidance, public comment, data analysis, professional judgment, and coordination with other Federal, state, and local governments and American Indian tribes.

The planning criteria used in developing the Approved Plan for the Monument are as follows:

- The Approved Plan was completed in compliance with FLPMA, the Lake Mead Enabling Legislation, and with the NPS Organic Act requirements and NPS policies. Provisions of the Endangered Species Act, NEPA, National Historic Preservation Act, Clean Water Act, and other Federal laws and executive orders and management policy requirements were also met.

- The Approved Plan is consistent with Presidential Proclamation 7265, meeting the Monument's purpose, preserving its significance, and complimenting its mission.

- This joint BLM/NPS Approved Plan and its associated RODs include data and maps that provide information on the Monument.

- Valid existing management decisions from previous plans, if appropriate, were carried forward into this Approved Plan or will be carried forward into subsequent activity and/or implementation plans. Decisions from the following plans were considered and have been modified or amended, as appropriate: Arizona Strip RMP (BLM 1992) as amended, Mojave Desert Plan Amendment (BLM 1998), Lake Mead NRA GMP (NPS 1986), Lake Mead NRA RMP (NPS 1999), Lake Mead Burro Management Plan (NPS 1995), Lake Management Plan (NPS 2003), Parashant and Mt. Trumbull Resource Conservation Area Plans (BLM 1997 and 1995, respectively), Mt. Trumbull and Mt. Logan Wilderness Management Plan (BLM 1990), Grand Wash Cliffs Wilderness Management Plan (BLM 1990), Habitat Management Plans, and the Arizona Strip Bighorn Sheep Management Plan (BLM and Arizona Game and Fish Department [AGFD] 2001).

- The Approved Plan is consistent with officially approved or adopted resource-related plans, policies, and programs of other Federal agencies, state and local governments, and Indian tribes so long as such plans, policies, and programs are consistent with the purposes, policies, and programs of Federal laws and regulations.

- Terms and conditions and reasonable and prudent alternatives from the Final Biological Opinion (2007) for this Approved Plan will be implemented. Conservation measures are included.

- Cooperating agency status was encouraged for affected Federal, state, and local governments and Indian tribes. The environmental analysis input and proposals of Cooperating Agencies was used to the maximum extent possible consistent with BLM and NPS responsibilities (43 CFR 1501.6 (a) (2).

- An adaptive management approach will be followed to achieve desired outcomes. Monitoring outlined in the Approved Plan will be used to determine if desired outcomes at the land use plan level are being achieved. If not, implementation actions and/or allowable uses will be modified to achieve land use plan objectives.

- The Approved Plan emphasizes ecological restoration and preservation of natural and cultural resources. It identifies opportunities and priorities for research and monitoring related to the key resource values of the Monument.

- The statewide land health standards, established by the Arizona Resource Advisory Council and approved by the Secretary of Interior, will be used to evaluate all surface disturbing activities on BLM-administered lands and on Lake Mead NRA lands where BLM administers grazing privileges. For NPS lands on the Monument, policies and procedures by which the NPS carries out its responsibilities under NEPA will be followed (Directors Order 12 and Directors Order 55), including identification of thresholds and impairment.

- The Approved Plan does not identify any public lands for designation as WSAs. However, the BLM has identified lands that will be managed to maintain wilderness characteristics so that such lands remain in a natural condition and provide outstanding opportunities for solitude and primitive and unconfined types of recreation activities. The 1979 Lake Mead NRA wilderness proposal was brought forward as the decision of record. Minor, non-controversial changes were made, as necessary for resource protection concerns. National Park Service Reference Manual # 41 was followed for guidance on wilderness preservation and management on NPS land within the Monument.

- Route inventories were completed for the Monument and were used as baseline data for travel management planning. All lands within the Monument were designated as either "limited" or "closed" to motorized and mechanized vehicle uses. Decisions concerning specific routes in "limited" areas resulted in a designated travel management network for the Monument. An authorized road system for NPS lands in the Monument was designated in 1986 and is not readdressed in this Approved Plan, except for minor adjustments necessary for resource protection.

- This Approved Plan directly involved American Indian tribal governments by providing strategies for the protection of recognized sacred and traditional uses and sites.

- The lifestyles of area residents including the activities of grazing, hunting, other resource uses, and recreation are recognized in the Approved Plan. Much of the Monument's historic value is connected with ranching operations, both past and present. Vintage

ranching structures and facilities that hold great historical and social significance were incorporated into the Approved Plan.

- The Approved Plan does not address Monument or statutory wilderness boundary adjustments.
- Any new visitor centers considered will be located outside the Monument and generally within existing communities.
- This Approved Plan sets forth a framework for managing recreation and commercial activities in order to produce a variety of beneficial outcomes gained through safe and enjoyable visitor experiences and activities that require appropriate natural and community landscapes.
- The Approved Plan used the Standards for Rangeland Health and Guidelines for Grazing Management to ensure appropriate grazing practices are followed to protect Monument values, watershed integrity, and habitats for plant and wildlife species on both BLM and NPS lands.
- The Approved Plan considered public input, interests, and values; past and present uses of public land and adjacent land; public benefits of providing goods and services; environmental impacts; social and economic values; public safety; and ecosystem restoration.

PLANNING PROCESS

This Approved Plan was developed in conjunction with the Approved Plan for Vermilion Cliffs National Monument and the Approved RMP for the Arizona Strip Field Office. The overall planning process began in February 2001 when the BLM and NPS formed an interdisciplinary/ interagency planning team, based in St. George, Utah (see Appendix P for the list of preparers). While the history of the planning process involves the other two planning areas (Vermilion Cliffs National Monument and the Arizona Strip Field Office), the discussion here focuses solely on the development of the Approved Plan for Grand Canyon-Parashant National Monument.

The planning team for the creation of this Approved Plan was comprised of BLM and NPS staff, resource specialists, and Monument managers. The planning team met numerous times beginning in 2001 to gather background information, identify goals and objectives, examine resource issues, develop alternatives, and write/review the Draft Plan/EIS and Proposed Plan/FEIS for this Approved Plan. In addition, a series of Community Based Partnership and Stewardship courses were held in northern Arizona and southern Utah in which the public provided early information and communication regarding the Monument. The NOI to prepare an

EIS on the management plan for the Monument (as well as the other two planning areas) was published in the *Federal Register* on April 24, 2002. Following this, the BLM and NPS hosted a series of public open houses in 2002 and 2003 to solicit public comment on the scoping issues and preliminary alternatives for the Draft Plan/EIS.

The Draft Plan/EIS presented a No Action Alternative (Alternative A) and four action alternatives (Alternatives B, C, D, and E). Alternative E was the agencies' (BLM and NPS) Preferred Alternative because it balanced human use/influence with resource protection. The Notice of Availability (NOA) of the Draft Plan/EIS was published on November 16, 2005, initiating a 90-day public review. The agencies also held a series of open house meetings to solicit public comment on the Draft Plan/EIS in January of 2006.

The Proposed Plan/FEIS, published in January 2007, responded to public comment and cooperative agency review of the Draft Plan/EIS through numerous revisions and modifications, as well as provided direct responses to comments. In this fashion, the agencies' Preferred Alternative in the Draft Plan/EIS was modified and presented as the Proposed Plan (Alternative E) in the Proposed Plan/FEIS. The NOA for the Proposed Plan/FEIS was published in the *Federal Register* on March 2, 2007, which opened the 30-day public protest period in accordance with 43 CFR Part 1610.5-2. The BLM received seven protest letters during this period. The BLM Director addressed all protests without making significant changes to the Proposed Plan; however, the protests received did lead to minor adjustments, corrections, and clarifications. This Approved Plan is one of three management plans that were developed from the Proposed Plan/FEIS that guides future management actions in their respective units. The NPS does not have a formal process for protesting NPS decisions in the Proposed Plan/FEIS.

RELATIONSHIP TO BLM AND NPS POLICIES, PLANS, AND PROGRAMS

This section describes the relationship of this Approved Plan to other BLM and NPS policies and programs, the role of collaboration efforts in the planning process, the consideration of related plans (state, local, and tribal), and policies and decisions that have affected the planning process.

Under NEPA, Federal agencies are mandated to prepare EISs for major Federal actions. This Approved Plan conforms to CEQ regulations for implementing NEPA requirements (40 CFR 1500-1508).

The BLM planning process is guided by NEPA, FLPMA, and the planning guidance contained in 43 CFR 1600. The Organic Act of 1916, as amended, directs the NPS to manage units "to conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations." The National Parks and Recreation Act of 1978 is the legal authority requiring each national park unit to complete a GMP in conformance with park

enabling legislation and the Organic Act of 1916. Director's Order 2 (NPS 2000) provides planning guidance. The planning process for both agencies involves an interdisciplinary approach and provides opportunities for public involvement and interagency coordination.

Management plans ensure that the BLM manages public lands in accordance with the intent of Congress as stated in FLPMA, under the principles of multiple use and sustained yield. As required by FLPMA, public lands must be managed in a manner that:

a) Protects the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water, and cultural resources and values
b) Where appropriate, preserves and protects certain public lands in their natural condition and provides food and habitat for fish and wildlife and domestic animals
c) Provides for outdoor recreation and human occupancy and use by encouraging collaboration and public participation through the planning process

In addition, public lands must be managed in a manner that recognizes the Nation's need for domestic sources for minerals, food, timber, and fiber from public lands.

In addition to the Federal mandates and guidelines mentioned above, the planning team considered a number of existing management plans, programmatic documents, and standards and guidelines in the preparation of this Approved Plan. These include the following:

Land Use Plans and Amendments

- Arizona Strip District RMP (BLM 1992)
- Lake Mead GMP and FEIS (NPS 1986)
- Arizona Strip RMP Mojave Desert Amendment (BLM 1998)
- Arizona Statewide Land Use Plan Amendment for Fire, Fuels, and Air Quality Management Finding of No Significant Impact and Environmental Assessment (BLM 2004)

Activity (Implementation) Level Plans

- Shivwits Resource Area Implementation Plan for the Arizona Strip District Approved RMP (BLM 1992)
- Grand Canyon-Parashant National Monument Interdisciplinary Management Plan (BLM and NPS 1997)
- Mt. Trumbull Resource Conservation Area Plan (BLM 1995)
- Land Protection Plan for Lake Mead NRA (NPS 1987)
- Lake Mead NRA Burro Management Plan and Final EIS (NPS 1995)
- Lake Mead NRA Minerals Management Plan (NPS 1986)
- Lake Mead NRA Wilderness Proposal (NPS 1979)
- Lake Management Plan: Lake Mead NRA (NPS 2003)

- Mt. Trumbull and Mt. Logan Wilderness Management Plan (BLM 1990)
- Grand Wash Cliffs Wilderness Management Plan (BLM 1990)
- Arizona Strip Desert Bighorn Sheep Management Plan (BLM and AGFD 2001)
- Southwestern Willow Flycatcher (*Empidonax traillii extimus*) Final Recovery Plan (U.S. Fish and Wildlife Service [USFWS] 2002)
- Biological Opinion for the Arizona Strip RMP-Mojave Amendment (U.S. Fish and Wildlife Service [USFWS] 1998)
- Recovery Plan for the California Condor (USFWS 1996)
- Desert Tortoise (Mojave Population) Recovery Plan (USFWS 1994)

Programmatic NEPA Documents

- BLM Vegetation Treatment FEIS (BLM 1991)

Policy and Rules

- Arizona Standards for Rangeland Health and Guidelines for Grazing Administration (BLM 1997)
- NPS Management Policies (NPS 2006)

These documents were examined not only to assure appropriate integration and compliance, but also to identify information still appropriate for inclusion in the Approved Plan and/or decisions that are still valid and could be carried forward. Activity plans that have been tiered off these plans have also been considered in this planning effort.

National Park Service Carrying Capacity

The NPS identified implementation commitments for visitor carrying capacities for NPS lands within the Monument (NPS Management Policies, National Historic Preservation Act, NPS Organic Act, Director's Order 22, Title 36 of the CFR, and the 1978 National Parks and Recreation Act).

The laws, regulations, and policies leave considerable room for judgment about the best mix of types and levels of visitor use activities. For this reason, most decisions relating to visitor experience and use are addressed in the Recreation and Travel Management sections of this Approved Plan.

The NPS took the following kinds of actions to meet legal and policy requirements related to visitor experience and use of the NPS portion of the Monument:

- Visitors will be provided the opportunity to understand, appreciate, and enjoy the Monument. (Management directions within this broad policy are discussed in Chapter 2 decisions.)

- Regulations governing visitor use and activities in 36 CFR will continue to be enforced.
- As future conditions warrant, the NPS will undertake detailed planning to establish carrying capacities, as part of the development of the Undeveloped Special Recreation Management Area Plan and the Wilderness Management Plan.

NPS Boundary Adjustments

The NPS does not address boundary adjustments in this Approved Plan. The NPS portion of the Monument is bounded on the south and east by Grand Canyon National Park, on the west by Lake Mead NRA, and on the north by the BLM portion of the Monument.

COLLABORATION

A variety of Federal, state, county, local, and tribal groups played a vital role in this planning process by attending meetings, providing databases and general information, conducting peer reviews, and assisting with the development of the management alternatives presented in this Approved Plan.

Intergovernmental, interagency, and Tribal relationships

The CEQ requirements contained in 40 CFR 1501.6 and 1508.5 mandate that Federal agencies responsible for preparing NEPA analysis and documentation do so "in cooperation with state and local governments" and other agencies with jurisdiction by law or special expertise (42 USC 4331(a), 4332(2)). In support of this mandate, the BLM and NPS planning team invited a broad range of local, county, state, tribal, and Federal agencies to attend a series of meetings to develop Memoranda of Understanding (MOUs) that would establish cooperating agency status with the BLM and NPS. Cooperating agency status offers the opportunity for interested agencies to assume additional roles and responsibilities beyond the collaborative planning processes of attending public meetings and reviewing and commenting on Approved Plan documents. Although they are time-limited documents, MOUs describe the roles and responsibilities of the BLM, NPS, and the cooperating agencies during the planning process. Invitations to become formal cooperators were sent to more than 200 agencies, communities, and tribes.

Ten cooperating agencies worked with the BLM and NPS to provide verbal and/or written comments during the planning process, which helped to develop this Approved Plan. The following ten cooperating agencies were concerned with the management of the resources and uses in this Monument and provided planning information on various planning topics, including Geographic Information System data. The following counties, communities, tribe, and state agencies signed MOUs to be cooperating agencies with the BLM and NPS for this planning effort:

- Coconino County, Arizona
- Mohave County, Arizona
- Kane County, Utah
- Washington County, Utah
- Fredonia, Arizona
- Colorado City, Arizona
- Kaibab Paiute Tribe
- Arizona Game and Fish Department
- U.S. Federal Highway Administration
- Arizona Department of Transportation

In addition, representatives from other interested Federal and state agencies and one tribe were provided planning information and were given the opportunity to comment on preliminary drafts of the FEIS and Approved Plan. Some attended the cooperating agency meetings and provided verbal and/or written comments. These entities were as follows:

- Arizona State Land Department
- NPS: Grand Canyon National Park, Glen Canyon NRA, Pipe Spring National Monument
- BLM: St. George Field Office, Las Vegas Field Office
- Department of Defense, Air Force Regional Environmental Office, San Francisco, California
- USFWS, Arizona Ecological Services Field Office, Flagstaff and Phoenix, Arizona
- U.S. Forest Service (USFS); North Kaibab Ranger District, Kaibab National Forest
- Hopi Tribe

The planning team also initiated consultation with American Indian tribes and bands who have oral traditions and historical or cultural concerns relating to the Monument, or who are documented as having occupied or used portions of the Monument during prehistoric or historic times. In January 2002, the BLM (also on behalf of the NPS) initiated consultation with 14 tribes or bands, including five bands within the Paiute Indian Tribe of Utah. Of these, three Tribes (Southern Paiute, Hopi, and Hualapai tribes) expressed concerns regarding the resources of this Monument and contributed information either as a cooperating agency (Kaibab Paiute Tribe) or as interested parties (Hopi and Hualapai tribes). In addition, most of these tribes were interested in the planning effort, some participated on field trips to the Monument, and some gave information at tribal meetings to staff involved in planning. All of the consulted tribes or bands currently live on or near the Monument or have historic ties to the area. Some continue to use the resources in the Monument. These tribes include:

- Chemehuevi Indian Tribe
- Havasupai Indian Tribe
- Hopi Tribe
- Hualapai Indian Tribe
- Kaibab Band of Paiutes
- Las Vegas Indian Center
- Las Vegas Paiute Tribe
- Moapa Band of Paiutes
- Pahrump Band of Paiutes
- Paiute Indian Tribe of Utah (Indian Peak, Cedar, Shivwits, Koosharem, and Kanosh Band of Paiutes)
- Pueblo of Zuni
- San Juan Southern Paiute Tribe

Tribal members expressed concern for the natural and cultural resources on the Monument, access to and use of these resources, and management of these resources on public lands.

The Bureau of Applied Research and Anthropology at the University of Arizona in Tucson conducted a Southern Paiute ethnographic and place name study on the Arizona Strip, including the Monument, in conjunction with this planning effort (Stoffle et al. 2004).

Other Stakeholder Relationships

Various other groups also played a vital role in the planning process. Their participation was informal and infrequent. One of these groups, the Arizona Strip Alliance, was formed in the late 1990s in response to the early discussions regarding the establishment of the Monument on the Arizona Strip. Local communities, counties, and agency representatives from southern Utah and northern Arizona united in order to plan on a regional scale. Employees from BLM's planning team attended Alliance meetings and kept members up-to-date on current planning efforts.

The Arizona Wilderness Coalition, Grand Canyon Chapter of the Sierra Club, Wilderness Society, Grand Canyon Wildlands Council, and Grand Canyon Trust are other groups that played an important role in the planning process. These groups all provided major contributions in the development of this Approved Plan including public scoping comments recommending a transportation plan, additional WSAs, information on the effects of transportation systems on wildlife, and other planning and resource information and recommendations.

In order to address the specific needs of wildlife, fish, and special status plants and animals, a group of biologists and botanists met to develop specific guidance and direction to meet those needs for this Approved Plan. Team participants included staff from the AGFD, USFWS, Lake

Mead NRA, North Kaibab Ranger District of the USFS, and Arizona Strip District BLM. Major contributions from this team included the development of a comprehensive resource assessment for wildlife and special status species, background information on the biology of a variety of species affected by the Approved Plan, and a set of proactive decisions appropriate to each of the alternatives. The team also provided comments and recommendations on the route designations, vegetation management, and other sections of the Approved Plan.

RELATED PLANS

Title II, Section 202 of FLPMA provides guidance for the BLM's planning process to coordinate planning efforts with American Indian tribes, other Federal departments and agencies, and agencies of state and local governments. The NPS is also guided to do the same under NPS Management Policies (NPS 2006). To accomplish these directives, the BLM and NPS have kept abreast of state and local plans, assured that consideration is given to such plans, and worked with these other entities to avoid inconsistencies among their various plans. Section 202 of FLPMA goes on to state in Subsection (c)(9) that "[L]and use plans of the Secretary under this section shall be consistent with state and local plans to the maximum extent he [sic] finds consistent with Federal law and the purposes of this Act."

In keeping with the above mandates, members of the planning team reviewed the Federal, county, and municipal plans listed below for consistency:

- Mohave County, Arizona, Comprehensive Plan (Mohave County 2003)
- Grand Canyon National Park GMP (NPS 1995)
- Colorado River Management Plan (NPS 2006)
- Las Vegas BLM RMP (BLM 1998)
- Mesquite, Nevada, Master Plan (1994) and Updates (2007)
- AGFD Strategic Plan (AGFD 2006)

OVERALL VISION

A vision, as used in this context, is an ideal to strive for which is not quantifiable or set to a specific time frame. A goal is a statement of a desired outcome that often has quantifiable measures and established time frames for achievement.

The vision for the Monument is to retain, where it currently exists, the present natural and socially remote nature of the Monument while still allowing compatible human use to occur within "the place where the West stays wild."

PURPOSE, SIGNIFICANCE AND MISSION STATEMENTS

Purpose, significance, and mission statements clarify the intent of the Monument proclamation and are used to shape the development of this Approved Plan. Purpose statements clarify why the Monument was set aside for special management. Significance statements address what makes the area unique, and mission statements reflect ideal conditions that managers should strive to attain.

Purpose

The purpose of this Monument is to retain, for public interest (scientific inquiry, long-term preservation, and public use and enjoyment for present and future generations), well-preserved examples of scientific and historic objects of interest and to protect those objects from unauthorized location or settlement and from unauthorized appropriation, injury, destruction, or removal of any features. These objects include:

- The exposed Paleozoic and Mesozoic sedimentary strata on the boundary between two major geologic provinces: the Basin and Range and the Colorado Plateau
- The abundant fossil record
- The ecological diversity resulting from the junction of two physiographic ecoregions (the Basin and Range and Colorado Plateau) and three floristic provinces (the Mojave Desert, Great Basin, and Colorado Plateau), including a diversity of wildlife
- The undisturbed archaeological evidence, displaying the long and rich human history of the Monument and spanning more than 12,000 years
- Areas of importance to existing Indian tribes
- The colorful and engaging scenery, natural splendor, and a setting that provides for rugged recreation opportunities
- The historic resources, including evidence of early European exploration, Mormon settlements, historic ranches, sawmills, and old mining sites
- Remote and unspoiled landscapes with limited travel corridors

Significance

The Monument contains relatively intact ecosystems and spring/water sources in public ownership that can provide sites for restoration and re-introduction of species.

The Monument's engaging scenery and inspirational landscape provides for rugged recreation opportunities.

The ponderosa pine ecosystem in the Mt. Trumbull area is a biological resource of scientific interest, which has been studied to gain important insights regarding tree-ring climatic reconstruction, fire history, forest structure change, and the long-term persistence and stability of pine communities.

The vastness and isolated location of the Monument provides for solitude, natural quiet, dark night skies, and wilderness characteristics.

The Monument is one of the larger sparsely developed, isolated land areas in the contiguous 48 states.

The exposed rock layers from the Paleozoic, Mesozoic, and Cenozoic eras provide an unobscured view of the geology of the Colorado Plateau and Basin and Range physiographic provinces.

The Monument is an important watershed for the Colorado River.

Historic remnants of Euro-American exploration and settlement exist in nearly their original context, relatively undisturbed by vandalism and development, and are connected with contemporary uses.

The Monument has irreplaceable archaeological resources primarily of the Archaic, Ancestral Puebloan, and Southern Paiute occupations. These resources are significant because of their good condition, their connection with contemporary American Indians, and their location adjacent to the Grand Canyon – a place sacred to past and present peoples.

A dramatic elevation change (1,200 – 8,000 feet) in a relatively compact area creates rich ecological diversity where the Colorado Plateau and Mojave Desert merge.

The vastness of the Monument allows for large-scale ecological processes, combined with low levels of resource conflicts providing unprecedented opportunity for ecological research.

Mission

Grand Canyon-Parashant National Monument is a model of land management for the BLM and NPS that conserves the natural, scientific, and historic resources and includes ecological restoration and protection in a broad ecosystem context, while honoring the history and living traditions of the people who came before us: "The place where the West stays wild." The goal of Monument management is to achieve the following:

1. Natural and cultural resources and associated values of the Monument are protected, restored, and maintained in good condition and managed within their broader ecosystem and cultural context. The protection of cultural, biological, and physical resources and human values for which the Monument was created receives the highest priority in planning and management.

2. Management decisions about resources and visitors are based on scientific information. The Monument is a model of scientifically based ecological restoration, research, and investigative studies that guide the restoration of healthy native ecosystems, natural fire regimes, and cultural landscapes.

3. The variety of natural and social settings are managed to preserve the remote and essentially unspoiled landscape character while providing opportunities for people, communities, and the environment to benefit from visitors experiencing adventure, beautiful vistas, a retreat from the pressures of modern life, and a sense of discovery through a variety of appropriate and sustainable backcountry activities. The public receives the information they need to have a safe and enjoyable experience.

4. New planning direction (developed through a collaborative process) and an accumulation of valid existing decisions provide clear direction for the management of the Monument.

5. The infrastructure footprint is the minimum necessary and is of consistent quality to provide for visual enjoyment, public safety, and protection of Monument values.

6. Sustainable, traditional ranching operations and associated interpretive activities showcase the Monument's historical lifestyles and enhance visitor experience.

7. Conservation and restoration of habitats that support sustainable populations of a full range of native species, including predators, are emphasized. Recovery and protection of special status species are a primary focus.

8. A variety of backcountry driving experiences are provided to key destinations and features via a system of designated roads while protecting Monument objects, the context that supports them, and other natural and cultural resources.

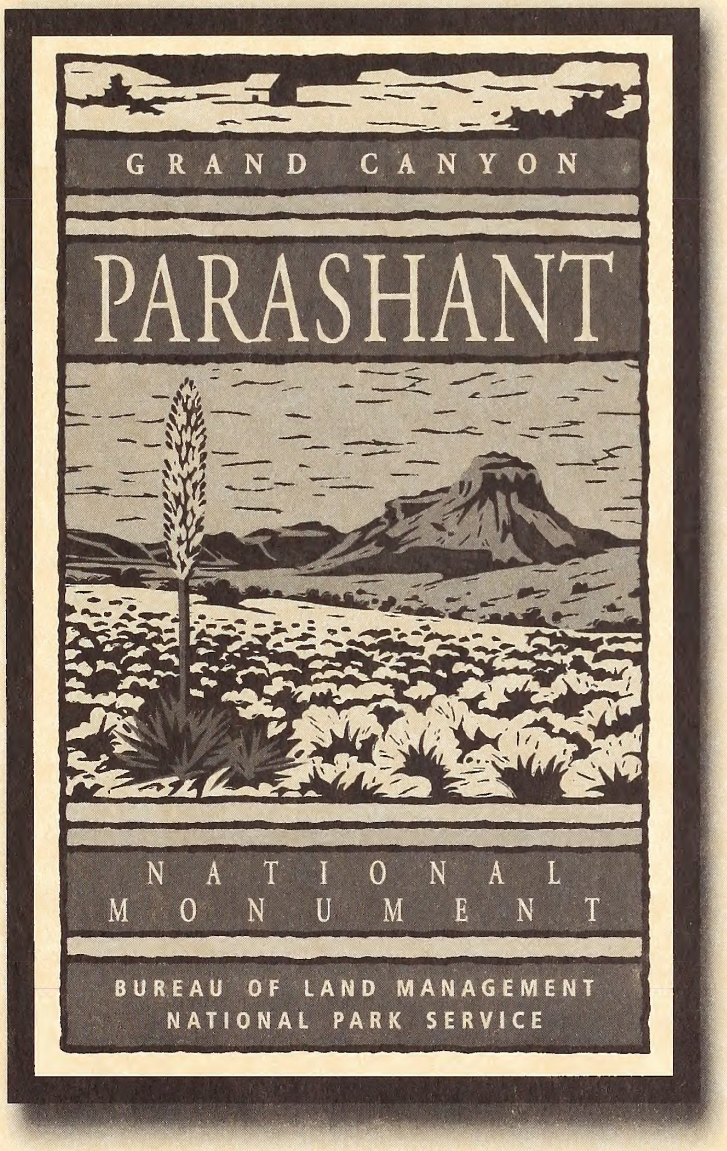
9. The preservation of natural quiet is emphasized in wilderness areas and other remote settings.

10. The public understands and appreciates the purposes and significance of the Monument and its resources for this and future generations.

11. Contemporary management practices, systems, and technologies are used to effectively accomplish the joint mission.

12. The Monument serves as a model of efficient interagency coordination, incorporating the strengths of each agency. The Monument increases its managerial resources through initiatives and support from other agencies, organizations, and individuals.

Chapter 2



"The desert is time, exposed time, geologic time. One needs time in the desert to see. When one of us says, 'Look, there's nothing out there,' what we are really saying is, 'I cannot see.'"

Terry Tempest Williams, 2001

CHAPTER 2: THE PLAN

INTRODUCTION

This chapter describes desired future conditions (DFCs) and actions to fulfill the management direction discussed in Chapter 1. It is arranged under the main headings of Management Units, Management Decisions, Decision Tables (the decisions), Administrative Actions, Environmental Analysis and Interrelationships, and Public Involvement. The management units described below were used to guide development of the management decisions made in Grand Canyon-Parashant National Monument (the Monument).

MANAGEMENT UNITS

Management units are geographic areas with similar resource management goals (see Map 2.1). Four management units (Community, Corridors, Back Roads, and Outback) guide land use plan decisions in specific geographic areas with similar landscapes, resources, and resource uses in the Monument.

The polygons that outline the location of the four management units are identical to the travel management areas (TMAs; see Map 2.16). The corresponding TMAs for each management unit are shown below in parentheses after the management unit name. Travel management areas, however, describe areas delineated for varying types of access, while management units are not land use allocations or decisions. This does not diminish their value as management tools as they assisted in better understanding the differing areas and associated uses and resources in the Monument.

Improvements (facilities or projects) associated with valid, existing rights and permitted uses could occur in any management unit, though the influence they have on the landscape character may vary greatly. Facilities include, but are not limited to transmission lines, communications facilities, and kiosks. Projects could include, but are not limited to corrals, catchments, pipelines, fences, wells, and troughs.

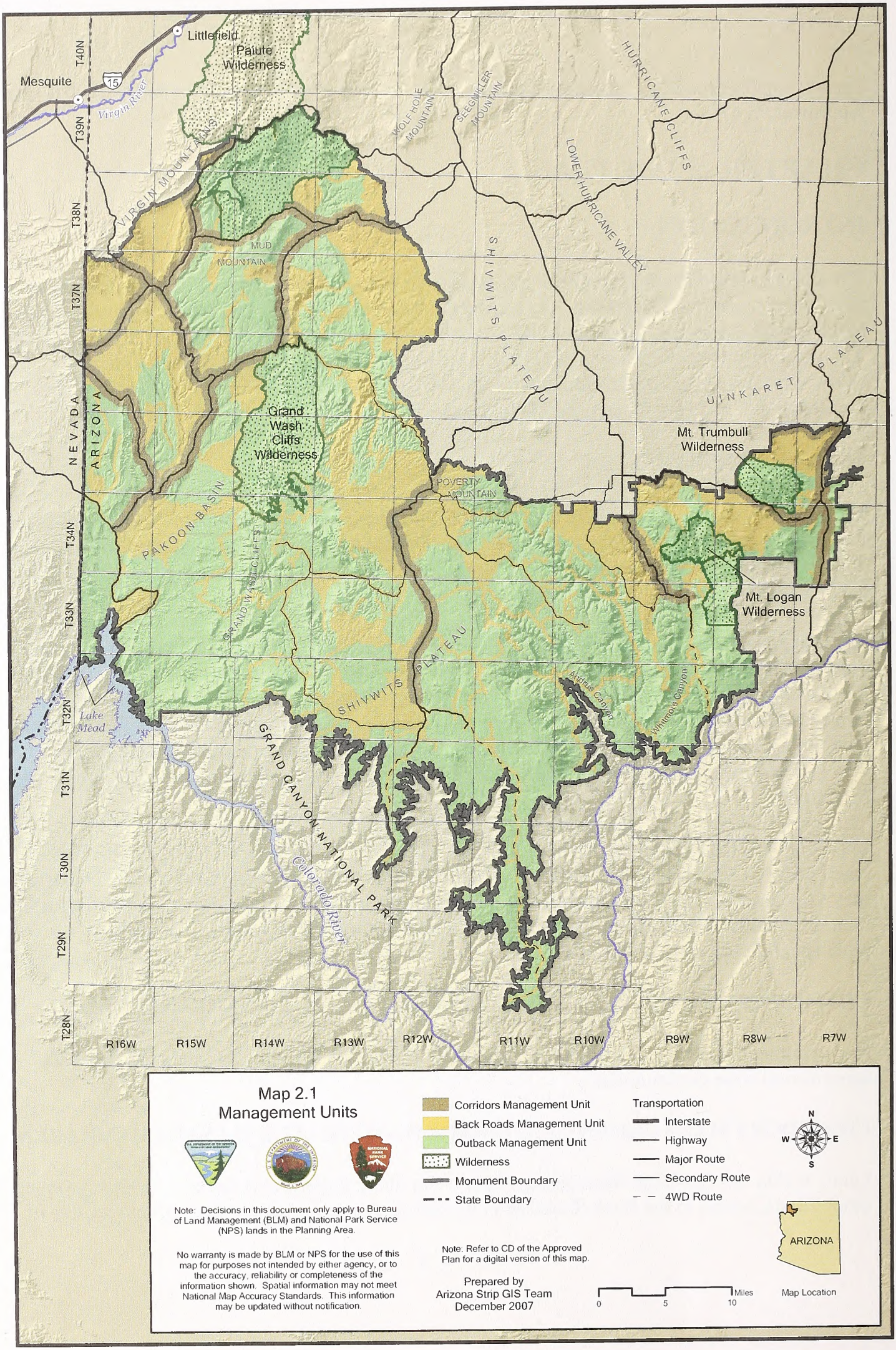
COMMUNITY MANAGEMENT UNIT (RURAL TRAVEL MANAGEMENT AREA)

No Monument lands are found in the Community Management Unit because the Monument is far-removed from communities.

CORRIDORS MANAGEMENT UNIT (BACKWAYS TRAVEL MANAGEMENT AREA)

Lands within the Corridors Management Unit occur along major travel routes, providing, among other things, access to the Back Roads and Outback management units. They offer a variety of

Map 2.1 Management Units



Map 2.1
Management Units

Note: Decisions in this document only apply to Bureau of Land Management (BLM) and National Park Service (NPS) lands in the Planning Area.

No warranty is made by BLM or NPS for the use of this map for purposes not intended by either agency, or to the accuracy, reliability or completeness of the information shown. Spatial information may not meet National Map Accuracy Standards. This information may be updated without notification.

- Corridors Management Unit
- Back Roads Management Unit
- Outback Management Unit
- Wilderness
- Monument Boundary
- State Boundary

Transportation
- Interstate
- Highway
- Major Route
- Secondary Route
- 4WD Route

Note: Refer to CD of the Approved Plan for a digital version of this map.

Prepared by
Arizona Strip GIS Team
December 2007

0 5 10 Miles

ARIZONA
Map Location

recreation opportunities, such as viewing scenery, vehicle touring (by means of automobiles, motorcycles/off-highway vehicles [OHVs], and aircraft), hiking and walking, bicycling, horseback riding, camping, picnicking, hunting, studying nature, using interpretive services, and participating in compatible organized events. Such activities occur with a moderate frequency of interaction with other people. These areas also provide the most opportunities for short-term or day-use recreation activities related to vehicle touring.

The Corridors Management Unit is characterized by predominantly natural-appearing environments with moderate evidences of the sights and sounds and uses of others. Some modifications to the landscape could occur, but not to the exclusion of the protection of Monument objects, visual, natural, and cultural resources and uses. Only 9 percent of Monument lands are in the Corridors Management Unit, mainly in the northeastern portion of the Monument. No National Park Service (NPS) lands are in the Corridors Management Unit as major travel routes cross Bureau of Land Management (BLM) lands from the north and northwest before reaching NPS-administered lands in the southern end of the Monument

BACK ROADS MANAGEMENT UNIT (SPECIALIZED TRAVEL MANAGEMENT AREA)

Lands within the Back Roads Management Unit provide a variety of dispersed recreation opportunities such as viewing scenery, riding motorcycles/OHVs, vehicle touring, hiking and walking, bicycling, horseback riding, camping, picnicking, hunting, studying nature, using interpretive services, and participating in compatible organized events. Such activities occur with low to moderate frequency of interaction with other people. While concentration of users would be low, evidence of other users would be relatively high.

Lands identified within the Back Roads Management Unit are characterized by predominantly natural or natural-appearing environments of moderate to large size with moderate probabilities of experiencing isolation from the sights and sounds of other people. These natural appearing landscapes and open spaces contribute to high-quality visitor experiences. Some modifications to the landscape could be expected, but would be tempered by the need to protect important resources, including Monument objects. Approximately 24 percent of combined BLM and NPS-administered lands in the Monument are within the Back Roads Management Unit.

OUTBACK MANAGEMENT UNIT (PRIMITIVE TRAVEL MANAGEMENT AREA)

Lands within the Outback Management Unit provide opportunities for undeveloped, primitive, and self-directed recreation opportunities such as viewing scenery, hiking and walking, horseback riding, backpacking, hunting, studying nature, canyoneering, and rock climbing. The frequency of interaction with other people is low and evidence of other users is minimal.

Lands classified as within the Outback Management Unit are characterized by predominantly natural or natural-appearing environments of moderate to large size. The lowest level of landscape modifications is expected compared to the other management units. Remote settings, natural landscapes, solitude, and opportunities for primitive recreation are minimally impacted by human activity. Approximately 67 percent of combined BLM and NPS-administered lands in the Monument are within the Outback Management Unit.

MANAGEMENT DECISIONS

This section of the Approved Plan presents the goals, DFCs, special designations, land use allocations, management actions, and implementation decisions established for public lands within the Monument.

Goals for the Monument include:

1. The variety of remote natural and social settings will be managed to preserve essentially natural appearing landscapes. Visitors will have the opportunity to experience adventure, beautiful vistas, retreat from the pressures of modern life, and a sense of discovery through a variety of appropriate and sustainable outdoor recreation activities and travel modes.

2. The proclamation for the Monument and its purpose, significance, and mission statements will guide management of this Monument. The National Monument is the dominant reservation for the public lands within the Monument.

3. The BLM and NPS will manage Monument lands for the benefit of local, regional, national, and international publics to provide recreational, scientific, commercial, social, and traditional uses while protecting the objects and context that supports them as required under the Antiquities Act and the proclamation.

4. The BLM and NPS will provide long-term protection and sustain the health and diversity of the public lands and resources that they manage for the use and enjoyment of present and future generations.

5. The BLM and NPS will work cooperatively with local, regional, state, county, and Federal agencies; tribes; communities; user groups; universities; researchers; and the interested public to achieve the above goals.

LAND USE PLAN DECISIONS

Land use plan decisions represent the desired outcomes and the actions needed to achieve them. Development of these decisions used the planning process found in 43 Code of Federal

Regulations (CFR) 1600, which guide future land management actions and subsequent site-specific implementation decisions.

Many land use plan decisions are implemented or become effective upon approval of the management plan and may include DFCs, land use allocation or designation decisions such as OHV-area designations. Management actions that require additional site-specific project planning as funding becomes available will require further environmental analysis. Decisions to implement site-specific projects are subject to administrative review at the time such decisions are made. The BLM and NPS will continue to involve and collaborate with the public during implementation of this Approved Plan.

Desired Future Conditions

Land use plans express DFCs or desired outcomes in terms of specific goals, standards, and objectives for resources and/or uses. They direct BLM and NPS actions in most effectively meeting legal mandates, numerous regulatory responsibilities, national policy, state director (BLM) and director (NPS) guidance, and other resource or social needs. The allocations or designations, actions to achieve the DFCs, restrictions on uses, allowable uses, and special designations are the decisions that allow the BLM and NPS to work toward achieving the DFCs.

Special Designations

Special designations include those that are designated by Congress for special protection, such as wilderness areas or national historic or scenic trails. Such designations are not land use plan decisions; however; recommendations for designation can be made to Congress at the land use plan level. Congress may then act on these recommendations at a later time.

Administrative designations made by the BLM and NPS (e.g., designating watchable wildlife viewing sites) are also considered special designations and can be made in the land use plan.

Allowable Uses (Land Use Allocations)

Allowable uses or land use allocations are land use plan decisions that set apart geographic areas for specific resources or uses, such as areas where wildland fire is not desired, lands available or not for livestock grazing, or where OHV-designated areas are necessary. Allocations have geographic boundaries and are represented by polygons on maps in the land use plan. The management of allocated resources is described through the decisions proposed later in this chapter. It is common for specific resource or use allocations to overlap with other resource or use allocations.

Management Actions

Management actions set the framework that allows achievement of the DFCs. Management actions are categorized as actions to achieve desired outcomes, including actions to maintain, restore, or improve land/resource condition.

IMPLEMENTATION DECISIONS

Implementation decisions are management actions tied to a specific location. For the BLM, these are decisions that take action to implement land use plan decisions and are generally appealable to the Interior Board of Land Appeals (IBLA) under 43 CFR 4.410. Implementation or activity level decisions generally constitute BLM's or NPS's final approval allowing on-the-ground actions to proceed. These types of decisions require appropriate site-specific planning and National Environmental Policy Act (NEPA) analysis. They may be incorporated into implementation plans (activity or project plans) or may exist as stand-alone decisions.

Unlike land use plan decisions, BLM implementation decisions are not subject to protest under the planning regulations. Instead, implementation decisions are subject to various administrative remedies, particularly appeals to the IBLA. The NPS has no similar provision for protest of land use plan decisions or appeals process for implementation decisions.

DECISION TABLES

The management decisions (DFCs, special designations [SDs], land use allocations [LAs], and management actions [MAs]) and implementation decisions [IMPLs] under the Approved Plan for the Monument are presented in the following decision tables (Tables 2.1 - 2.18). Each decision is numbered and arranged by specific resources and resource uses, and is assigned one of the following codes:

- CL = Cultural Resources
- FM = Wildland Fire/Fire and Fuels Management
- GL = Geology and Paleontology
- GM = Livestock Grazing
- HB = Wild Burros
- HM = Public Health and Safety
- LR = Lands and Realty
- MI = Minerals
- RR = Recreation and Visitor Services/Interpretation and Environmental Education
- RP = Riparian Ecological Zone
- SN = Soundscapes
- SR = Scientific Research

- TE = Special Status Species
- TM = Travel Management
- VM = Vegetation
- VR = Visual Resources
- WC = Wilderness Characteristics
- WF = Wildlife and Fisheries
- WM = Wilderness
- WS = Air, Water, and Soils

Area and length figures referenced in Tables 2.1 – 2.18 and throughout this document are based on the best available Geographic Information System (GIS) data at the time of publication. These figures are based on the Universal Transverse Mercator Zone 12 projection referencing the North American Datum of 1983. Analysis and calculation have been made on various GIS layers, which may or may not correspond to each other. Differences in area or length correlations between the various calculations in this document are due to minor discrepancies between GIS layers.

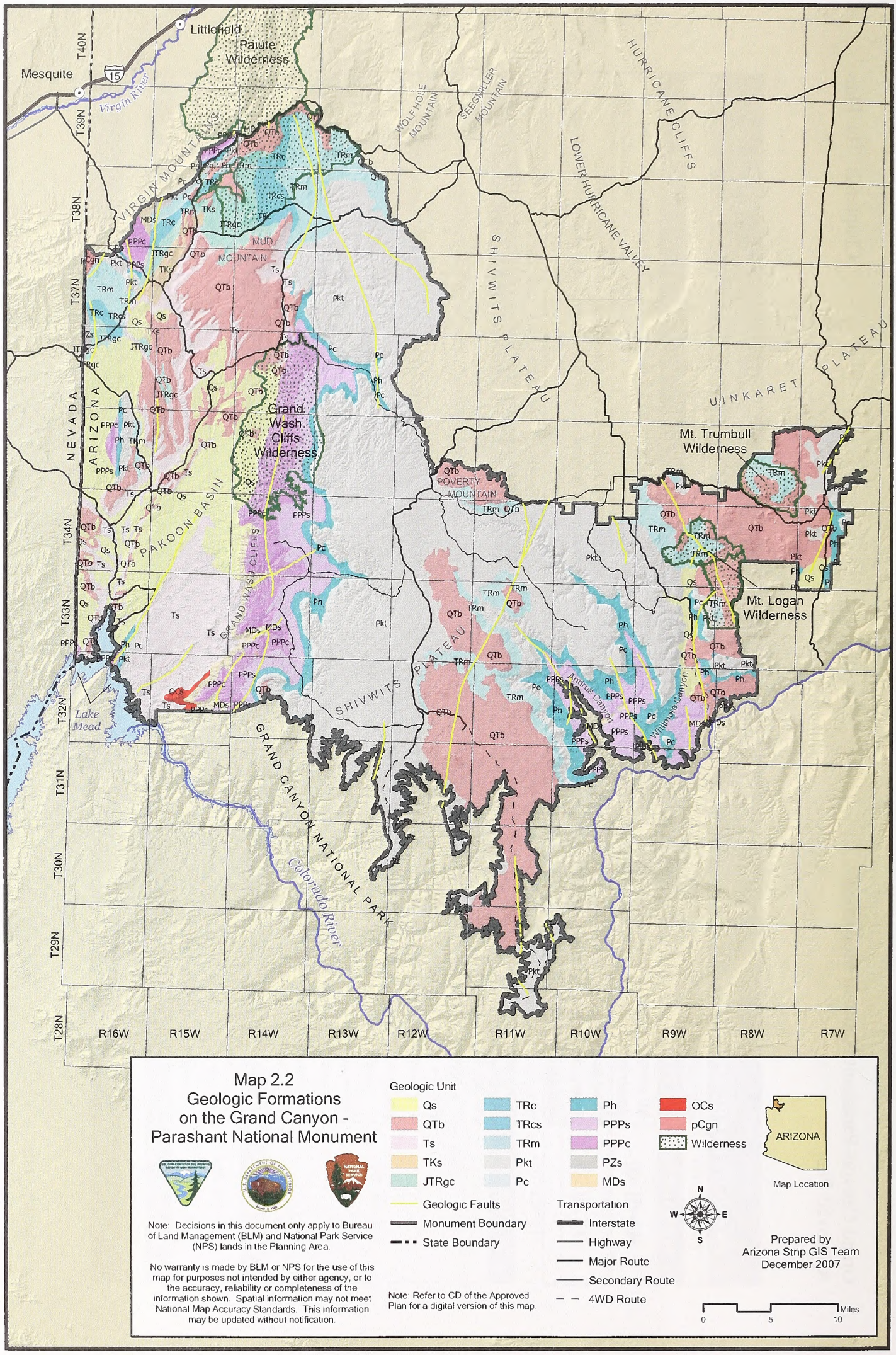
Acreage numbers provided for Vegetation and Fire and Fuels Management decisions were generated as actual acres treated or by specialists' projections based on available habitat. They are not GIS generated numbers.

TABLE 2.1. AIR, WATER, AND SOILS (WATERSHED: WS)	
Decision #	**Decision Text**
AIR MANAGEMENT	
A. DESIRED FUTURE CONDITIONS	
DFC-WS-01	Federal and State air quality standards will be maintained within the Monument.
B. MANAGEMENT ACTIONS	
MA-WS-01	Impacts to air quality will be prevented or reduced through the application of specific mitigation measures identified in activity level planning and NEPA level review.
MA-WS-02	The potential adverse impact of fugitive dust will be mitigated during surface disturbing projects.
WATER MANAGEMENT	
A. DESIRED FUTURE CONDITIONS	
DFC-WS-02	All surface water will meet Arizona State water quality standards.
DFC-WS-03	Surface water availability at seeps and springs will be appropriate for the soil type, climate, and landform.
DFC-WS-04	Ecological functions and processes will be intact at all seeps and springs.
DFC-WS-05	Flowing water systems will provide continuous flowing water and associated riparian vegetative cover, where possible.
DFC-WS-06	The natural hydrologic functions of all watersheds will be intact.
B. MANAGEMENT ACTIONS	
MA-WS-03	Impacts to water quality will be prevented or reduced through the application of specific mitigation measures identified in activity level planning and NEPA level review.
MA-WS-04	The BLM will file for water rights in accordance with State of Arizona water laws on available water sources for recreational use, wildlife, livestock, administrative uses, and in-stream flows, subject to funding/staffing constraints.
MA-WS-05	Natural values associated with floodplains and wetlands will be restored and preserved by avoiding floodplain occupancy and development. If development or occupancy is necessary, impacts will be mitigated through consulting and permitting with appropriate agencies.
MA-WS-06	The BLM will continue to work with appropriate state authorities to ensure that water resources needed will be available.
SOIL MANAGEMENT	
A. DESIRED FUTURE CONDITIONS	
DFC-WS-07	Soils will exhibit infiltration, permeability, and erosion rates appropriate for the soil type, climate, and landform.
DFC-WS-08	Physical soil crusts will show an increase in organic cover including cryptobiotic colonies, moving them towards being organic crusts.
B. MANAGEMENT ACTIONS	
MA-WS-07	Surface disturbance and reclamation activities will proceed consistent with current permits and subject to the following: • Arizona Standards for Rangeland Health will be followed to maintain or improve soil conditions. (See Livestock Grazing decisions.)

TABLE 2.1. AIR, WATER, AND SOILS (WATERSHED: WS)	
Decision #	**Decision Text**
	• Activities will be the minimum necessary to accomplish the task. • Reclamation will be required for road realignments. • Measures to stabilize soils and minimize surface water runoff will be required, both during project activities and following project completion. • Reclamation of all surface disturbances will be initiated during or immediately upon completion of the authorized project. Reclamation can include re-contouring the disturbed area to blend with the surrounding terrain, ripping compacted areas, replacement of topsoil, seeding, planting, and/or providing effective ground cover. • All temporary roads will be closed and reclaimed immediately upon completion of the project. Reclaimed roads can be barricaded or signed until reclamation objectives are achieved. • Facilities or improvements no longer necessary will be removed and the sites will be reclaimed, provided no historic properties are affected.
MA-WS-08	Restoration and reclamation actions will be consistent with vegetation management decisions for each Ecological Zone.
MA-WS-09	Emphasis for management of all grazing allotments in Watershed Condition Class IV will be to reduce erosion and improve the watershed condition class. Evaluations will be completed through the Arizona Standards for Rangeland Health (see Livestock Grazing decisions). More detailed assessments of watershed condition will be done in priority watersheds, subject to funding/staffing constraints in the watershed program.
MA-WS-10	The following watersheds will be priority for assessment, treatments and/or restrictions on use to reduce erosion: Upper Lang's Run, Black Rock Mountain, and Parashant.

TABLE 2.2. GEOLOGY AND PALEONTOLOGY (GL)	
Decision #	**Decision Text**
A. DESIRED FUTURE CONDITIONS	
DFC-GL-01	Paleontological resources will be managed for their scientific, educational, and recreational values (see Map 2.2).
DFC-GL-02	Geological and paleontological Monument objects will be protected. These may include all vertebrate or uncommon invertebrate fossils or localities and relevant and highly visible geological features and formations.
B. LAND USE ALLOCATIONS	
LA-GL-01	Areas will be classified according to their potential to contain vertebrate fossils or noteworthy occurrences of invertebrate or plant fossils. These Paleontological Sensitivity Classes are: **Class 1 (Low sensitivity)**: Igneous and metamorphic geologic units and sedimentary geologic units where vertebrate fossils or uncommon non-vertebrate fossils are unlikely to occur. **Class 2 (Moderate sensitivity)**: Sedimentary geologic units that are known to contain or have unknown potential to contain fossils that vary in significance, abundance, and predictable occurrence. **Class 3 (Moderate sensitivity)**: Areas where geologic units are known to contain fossils but have little or no risk of human-caused adverse impacts and/or low risk of natural degradation. **Class 4 (High sensitivity)**: Areas where geologic units regularly and predictably contain vertebrate fossils and/or uncommon non-vertebrate fossils, and are at risk of natural degradation and/or human-caused adverse impacts.
C. MANAGEMENT ACTIONS	
MA-GL-01	BLM and NPS will identify and protect significant fossils and allow for scientific research at paleontological sites, in accordance with permitting procedures.
MA-GL-02	Should paleontological resources be discovered within the Monument, the sites will be evaluated for sensitivity. The sites will then be classified and managed consistent with the land use allocation classifications described above.
MA-GL-03	The collection of any objects in the Monument, including paleontological resources (such as fossils or track ways) or rock specimens will not be authorized, except by permit for scientific research or use.
MA-GL-04	Prior to authorizing land uses in any Class 4 areas, a records search and paleontological survey and/or monitoring will be required so that impacts to vertebrate fossils and/or uncommon invertebrate fossils can be minimized or mitigated.
MA-GL-05	Adverse impacts to vertebrate and/or uncommon invertebrate paleontological resources will be mitigated.

CAVE AND KARST RESOURCES	
A. DESIRED FUTURE CONDITION	
DFC-GL-03	Significant cave and karst resources will be protected.
B. MANAGEMENT ACTIONS	
MA-GL-06	All caves and karst features will be considered significant, if they meet the criteria defined in 43 CFR Part 37. All caves on NPS land are classified as significant under the Federal Cave Resources Protection Act.
MA-GL-07	Cave and karst resources will be evaluated to determine proper and needed protective measures to ensure their continued viability. Protective measures can include restricting surface disturbing activities, limiting fire suppression, controlling visitor use, and restricting management actions.



Map 2.2 Geologic Formations on the Grand Canyon - Parashant National Monument

Map 2.2
Geologic Formations on the Grand Canyon - Parashant National Monument

Geologic Unit

Qs	TRc	Ph	OCs		
QTb	TRcs	PPPs	pCgn		
Ts	TRm	PPPc	Wilderness		
TKs	Pkt	PZs			
JTRgc	Pc	MDs			

Geologic Faults
Monument Boundary
State Boundary

Transportation
Interstate
Highway
Major Route
Secondary Route
4WD Route

Note: Refer to CD of the Approved Plan for a digital version of this map.

ARIZONA
Map Location

N W E S

Prepared by
Arizona Strip GIS Team
December 2007

0 5 10 Miles

Note: Decisions in this document only apply to Bureau of Land Management (BLM) and National Park Service (NPS) lands in the Planning Area.

No warranty is made by BLM or NPS for the use of this map for purposes not intended by either agency, or to the accuracy, reliability or completeness of the information shown. Spatial information may not meet National Map Accuracy Standards. This information may be updated without notification.

TABLE 2.3. VEGETATION AND FIRE AND FUELS MANAGEMENT (VM, FM, RP)	
Decision #	**Decision Text**
ALL ECOLOGICAL ZONES (see Map 2.3)	
A. DESIRED FUTURE CONDITIONS	
DFC-VM-01	All BLM watersheds will meet, or will be progressing towards meeting, the Standards for Rangeland Health for BLM-administered lands (see Appendix C) and NPS Vital Signs standards on NPS-administered lands.
DFC-VM-02	NPS watersheds will meet, or will be in improving condition toward meeting, NPS Vital Signs objectives and BLM Standards for Rangeland Health.
DFC-VM-03	Native vegetative communities will be protected, including those considered Monument objects. A mosaic of native perennial and non-invasive annual vegetative communities will be present across the landscape with diversity of species, canopy, density, and age class reflecting its local ecological site potential and naturally occurring habitat conditions.
DFC-VM-04	Vegetative communities will provide sufficient plant cover and litter accumulation to protect soils from wind and water erosion and enhance nutrient cycling and productivity, even during drought years.
DFC-VM-05	Ecological processes and functions will be protected, enhanced, and/or restored by allowing tools that are necessary and appropriate to mitigate adverse impacts of allowable uses and undesirable disturbances, and contribute to meeting the Standards for Rangeland Health and NPS Vital Signs and enhance Monument values.
DFC-VM-06	Invasive plant species will be contained, controlled, or eliminated and native species restored to meet Desired Plant Community (DPC) objectives.
DFC-VM-07	Each vegetation community is maintained within its natural range of variation in plant composition, structure, and function.
DFC-VM-08	In addition to the above, vegetation communities on NPS-administered lands retain ecological integrity where natural processes maintain native plants and plant communities and are the principal influence on community and population fluctuation.
Wildland Fire (see Map 2.4)	
DFC-FM-01	Loss of key ecosystem components to wildfire will be minimized.
DFC-FM-02	Fire return intervals and natural disturbances will be appropriate for the ecological site.
DFC-FM-03	Fire is recognized as a natural process in fire-adapted ecosystems and is used to achieve objectives for other resources.
DFC-FM-04	Fuels in Wildland-Urban Interface (WUI) areas are maintained at non-hazardous levels to provide for public and fire fighter safety.
DFC-FM-05	Prescribed fire activities comply with Federal and State air quality regulations.
DFC-FM-06	Fuel loads are maintained below levels that are considered to be hazardous.
B. LAND USE ALLOCATIONS	
Wildland Fire Use Areas (see Map 2.4)	
LA-FM-01	In Wildland Fire Use: Areas Suitable for Wildland Fire Use for Resource Management Benefit where fuel loading is high and current conditions constrain the use of fire (prescribed fire and fire use), prevention and mitigation programs will be emphasized to reduce

TABLE 2.3. VEGETATION AND FIRE AND FUELS MANAGEMENT (VM, FM, RP)	
Decision #	**Decision Text**
	unwanted ignitions and use mechanical, manual, chemical, or biological treatments to reduce fuel loads and meet resource objectives. Where conditions allow, consistent with land use allocations, naturally ignited wildland fire, prescribed fire, and a combination of mechanical, manual, chemical, and biological treatments will be used to maintain non-hazardous fuel levels, reduce the hazardous effects of unplanned wildland fires, achieve DFCs, and meet resource objectives (See BLM Fire Amendment, BLM Fire Management Plan, and NPS Fire Management Plan).
	Wildland Fire Use areas will include Riparian, Great Basin, Grassland, Interior Chaparral, Ponderosa Pine, Colorado Plateau Transition, and Mojave Transition (NPS-Andrus Plain only) ecological zones, and WUI areas (BLM only, depending on the surrounding vegetation, fuel loads, and other factors as determined in the BLM Fire Amendment and BLM and NPS Fire Management Plans). Wildland fire use in the riparian ecological zone will only be considered in areas where riparian restoration is planned, where fire use will help meet restoration objectives (e.g., reduce exotic vegetation), and where subsequent restoration work will be implemented (e.g., planting native vegetation).
Non-Wildland Fire Use Areas (see Map 2.4)	
LA-FM-02	In Non Wildland Fire Use: Areas Not Suitable for Wildland Fire Use for Resource Management Benefit, programs to reduce unwanted ignitions will be implemented by the BLM and NPS, and prevention, detection, and rapid suppression response techniques will be emphasized. Where fuel loading is high, mechanical, manual, chemical, or biological treatments and prescribed fire will be used to maintain non-hazardous levels of fuels and meet resource objectives.
	Non Wildland Fire Use areas will include: Mojave Desert, and Mojave Transition (except NPS Andrus Plain area) Ecological Zones, and WUI areas (depending on the surrounding vegetation, fuel loads, and other factors as determined in the BLM Fire Amendment and BLM and NPS Fire Management Plans).
Fire Suppression	
LA-FM-03	Appropriate Management Response (AMRs) for managing wildland fires will be used by the BLM and NPS (as identified in the BLM Fire Amendment and the BLM and NPS Fire Management Plans). The AMR is based on firefighter and public safety and objectives and constraints derived from the fire management allocations (Wildland Fire Use, Non Wildland Fire Use), relative risk to natural and cultural resources, DFCs, fire management unit objectives, potential complexity, the ability to defend management boundaries, and costs of protection. AMRs will be used in areas classified as Wildland Fire Use and Non Wildland Fire Use.
LA-FM-04	Firefighter and public safety will be the first priority in every fire management activity. Setting priorities among protecting human communities and community infrastructure, other property and improvements, and natural and cultural resources will be based on the values to be protected, human health and safety, and costs of protection.
LA-FM-05	Education, enforcement, and administrative fire prevention mitigation measures will continue to be provided to reduce unplanned human-caused fires.

TABLE 2.3. VEGETATION AND FIRE AND FUELS MANAGEMENT (VM, FM, RP)	
Decision #	**Decision Text**
LA-FM-06	Prescribed fire and fire use will be used in areas classified as Wildland Fire Use within BLM designated wilderness areas and NPS proposed wilderness to achieve DFCs and wilderness area management objectives described in each agency's Fire Management Plan. Vegetation can also be treated manually if minimum tool requirements are met. (See management decisions relating to designated wilderness in Special Designations section.)
LA-FM-07	Minimum impact suppression tactics will be used in designated and proposed wilderness. (See wilderness decisions in Special Designations section.)
LA-FM-08	Conservation measures described in Appendix G will be implemented for all fire suppression, restoration and rehabilitation, fuels treatments, prescribed burning, and other fire related actions in special status species habitats.
LA-FM-09	Suppression tactics that limit damage or disturbance to sensitive vegetation, soils, and wildlife habitat will be used. The use of heavy equipment, such as dozers, on BLM-administered lands will require approval from the BLM authorized officer. The use of heavy equipment on NPS-administered lands will require approval from the NPS Park Superintendent.
LA-FM-10	Prescribed fire and fire use can be used within designated and proposed wilderness areas where the areas have been classified as Wildland Fire Use to achieve DFCs and wilderness management objectives. Selection of vegetation treatment methods in designated and proposed wilderness will be consistent with minimum tool requirements and non-impairment standards. (See decisions relating to designated wilderness in Special Designations section.)
C. MANAGEMENT ACTIONS	
Desired Plant Community Objectives	
MA-VM-01	Seasonal restrictions, temporary reductions, or elimination of authorized activities will be implemented in conjunction with vegetation treatment projects to protect sensitive resources and/or ensure attainment of DPC objectives or Vital Sign standards.
Vegetative and Restoration Treatments	
MA-VM-02	Restoration and vegetation treatments will be authorized where protection of sensitive resources is ensured. Priority areas for restoration or vegetative treatment projects will be defined by ecological zone and major vegetation type and based on the following criteria: • To increase indigenous rare or uncommon species; • Where soil productivity has been reduced due to removal of soil organic matter or active erosion; • Where vegetative cover is inadequate to prevent soil erosion; • To improve habitat conditions for wildlife and/or special status species; • To restore degraded, drought-stricken, weed infested, or otherwise unhealthy areas; • To maintain previously treated areas; • To achieve DPC objectives; and • To meet activity plan objectives.

TABLE 2.3. VEGETATION AND FIRE AND FUELS MANAGEMENT (VM, FM, RP)	
Decision #	**Decision Text**
	On NPS-administered lands, individual restoration plans will be developed to meet DFCs, NPS Vital Signs standards, and related ecological objectives. Mitigation measures will be implemented for reducing impacts such as soil erosion or non-native plant encroachment, and minimum requirements analysis will be used in proposed wilderness.
MA-VM-03	On BLM-administered lands, the use and perpetuation of native species will be emphasized. However, when restoring or rehabilitating disturbed or degraded rangelands, non-intrusive, non-native plant species may be used where native species: • Are not available, • Are not economically feasible, • Cannot achieve DFCs, DPCs, or other ecological objectives as well as non-native species, and/or • Cannot compete with already established non-native species. Non-native forbs and perennial grasses can be used in preference to monocultures of non-native annuals.
	On BLM-administered lands, the development of site-specific DPC objectives, in accordance with ecological site potential, will continue. DPC objectives will be achieved through vegetation treatments and management of resource uses. DPC objectives will be included in all appropriate activity plans, including allotment management plans (AMPs).
	On NPS-administered lands, vegetation management objectives will be developed through Vital Signs monitoring. Monitoring vegetation communities will demonstrate retention of ecological integrity where natural processes maintain native plants and plant communities and are the principal influence on community and population fluctuation. When natural processes have been disrupted, DPC objectives will be achieved through vegetation treatments and managing resource uses, as appropriate.
MA-VM-04	Treatment methods and tools appropriate to the land use allocation and protection of Monument objects can be authorized to achieve DFCs, DPCs, or Vital Sign standards. Treatment methods can include, but are not limited to mechanical, chemical, biological, and fire or any combination thereof. Vegetation treatments and uses will be monitored as part of an adaptive management process. Seed priming and other enhancement techniques can be used to increase germination rates. Treatments will be designed so that they do not encourage an increase in any invasive species. Minimum requirement analysis will be used in BLM designated wilderness and in NPS proposed wilderness. (See Appendix F for a list of potential methods and tools.)
	• On NPS-administered lands, chaining and other methods that cause substantial surface disturbance will not be permitted. • On NPS land, authorization of non-native seed use must be consistent with NPS policy, which states that revegetation efforts will use seeds, cuttings, or transplants representing species and gene pools native to the ecological portion of the park in which the restoration project is occurring. Where a natural area has become so degraded that restoration with native gene pools has proven unsuccessful, improved varieties or closely related native species may be used.
Sale or Use of Vegetation Products	
MA-VM-05	No areas will be allocated to sustained yield timber harvest.

TABLE 2.3. VEGETATION AND FIRE AND FUELS MANAGEMENT (VM, FM, RP)	
Decision #	**Decision Text**
MA-VM-06	On BLM-administered lands, fees or permits will not apply for the collection of pinyon pine seeds (pine nuts) for non-commercial, personal use.
MA-VM-07	Collection of listed, proposed, or candidate plant species will not be authorized.
MA-VM-08	Fees may not apply on BLM-administered lands for non-commercial, personal use quantities of items necessary for traditional, religious, or ceremonial purposes, such as herbals, medicines or traditional use items.
MA-VM-09	Gathering of dead and downed wood for campsite use will be authorized in areas where campfires are allowed.
MA-VM-10	The Monument will be closed to the general commercial sale of vegetative products, except for the following situations: • On BLM-administered lands, the sale, collection, or use of vegetative materials (e.g. native seed, medicinals, landscape mulch, posts, fuel wood, etc.) will require a permit and may be authorized if tied to a clearly defined science-based research or restoration project, and the use will be consistent with achieving the DFCs and protecting Monument objects. Permits will be authorized only for those areas where resource management objectives have been developed.
	On NPS-administered lands, the collection or use of vegetative materials will only be authorized in conjunction with documented research or restoration programs in accordance with NPS regulations and policy. The sale of vegetative materials will not be authorized.
	The Pakoon Desert Wildlife Management Areas (DWMA) will be closed to the collection of vegetative materials.
MA-VM-11	The BLM may authorize limited harvest of posts and/or poles for on site administrative purposes, including fence repair.
Salvage of Vegetation	
MA-VM-12	On BLM-administered lands, salvage of vegetation that will be destroyed through surface disturbing activities may be authorized where doing so will assist in achieving DPCs. Salvage and use will be allowed in the following priority (may require a permit from the State of Arizona): • Removal and maintenance for replanting during rehabilitation of the site being disturbed. • Removal and transplanting out of the area to be disturbed, especially to an area needing rehabilitation. • Removal and salvage by private individuals or to benefit the public (includes schools, churches, non-profit organizations).
	On NPS-administered lands, vegetation that will be destroyed through surface disturbing activities may be salvaged and used to rehabilitate the site or used at another site with similar ecological conditions requiring restoration or rehabilitation. Salvage and use will be allowed in the following priority (may require a permit from the State of Arizona): • Removal and maintenance for replanting during rehabilitation of the site being disturbed. • Removal and transplanting out of the area to be disturbed, especially to an area needing rehabilitation.
Noxious Weeds	
MA-VM-13	Implementation of ongoing noxious weed and invasive species control actions will be continued as per national guidance and the Weed Management Area Plan. Integrated weed management will continue using available tools to control noxious weeds consistent with

TABLE 2.3. VEGETATION AND FIRE AND FUELS MANAGEMENT (VM, FM, RP)	
Decision #	**Decision Text**
	vegetation management decisions for each Ecological Zone and as appropriate to the land use allocation and in order to protect resources and Monument values.
MA-VM-14	Certified weed-free feed, mulch, and seed will be required for all permitted uses to limit the spread of noxious weeds and other undesirable species. (See Livestock Grazing decisions and Recreation and Visitor Services decisions.)
MA-VM-15	Construction equipment, fire vehicles, and/or vehicles from outside the Monument used to implement authorized projects and/or uses will be required to be cleaned (using air, low pressure/high volume, or high-pressure water) prior to initiating the project. BLM and NPS vehicles will also be cleaned after being used within any infested area. As national policy is developed, the more stringent will be implemented. Vehicles leaving the area and later returning to continue the project will require re-cleaning.
RIPARIAN ECOLOGICAL ZONE	
A. DESIRED FUTURE CONDITIONS	
DFC-RP-01	Riparian areas, including Monument objects, will consist of a diversity of vertical and horizontal structures, vegetative age classes, and endemic species (see Map 2.3).
DFC-RP-02	Riparian areas will be protected, enhanced, and/or restored by allowing tools that are necessary and appropriate to mitigate adverse impacts of allowable uses and undesirable disturbances, and contribute to meeting the Arizona Standards for Rangeland Health, NPS Vital Signs, and enhance Monument objects and values.
DFC-RP-03	Ecological functions and processes will be intact with vegetative species composition and cover appropriate to the site.
DFC-RP-04	Where sites have the potential for over-story vegetation, the canopy cover of over-story and under-story vegetation will be at or approaching maximum density.
DFC-RP-05	All riparian areas will be in, or moving towards, proper functioning condition.
DFC-RP-06	All surface water will meet, or be improving towards, Arizona State water quality standards.
DFC-RP-07	Flowing water systems will provide contiguous water and associated riparian vegetative cover, where possible.
DFC-RP-08	Availability of surface water at seeps and springs will be appropriate for the soil type, climate, and landform and will support a diverse population of endemic plant and wildlife species.
DFC-RP-09	A sufficient quantity of water with safe access for wildlife will be available, where appropriate.
DFC-RP-10	Riparian communities will provide habitat for common species such as rush, cottonwood, willow, and yellow-breasted chat, as well as rare species such as southwestern willow (SW) flycatcher, common black hawk, Lucy's warbler, and speckled dace where consistent with site potential. (See Wildlife and Fish decisions.)
DFC-RP-11	Invasive plants and animals such as tamarisk, Russian olive, and brown-headed cowbird will be reduced or eliminated.
DFC-RP-12	In addition to the above, riparian communities on NPS-administered lands retain ecological integrity where natural processes maintain

TABLE 2.3. VEGETATION AND FIRE AND FUELS MANAGEMENT (VM, FM, RP)	
Decision #	**Decision Text**
	native plants and plant communities and are the principal influence on community and population fluctuation.
B. MANAGEMENT ACTIONS	
MA-RP-01	Habitat conditions at priority riparian areas will be maintained or improved. A preliminary list of priority riparian areas is included in Chapter 3, Table 3.8, and will be appended as new areas are identified. Priority riparian areas meet two or more of the following criteria: • Federal land with water rights. • Ecologically and economically feasible of reaching DFCs. • All riparian areas > or = to 0.5 acres in size. • Presence of Special Status Species. • Presence of surface water and/or saturated soil. • Presence of riparian species. • Distance to adjacent riparian areas greater than three miles.
MA-RP-02	The Riparian Ecological Zone will be managed for a mixture of herbaceous and woody vegetation in accordance with agencies' policies on native and non-native species.
MA-RP-03	Vegetation treatments can be used in the Riparian Ecological Zone to enhance vegetative diversity, restore native plant communities, maintain or increase wildlife habitat, and reduce or eliminate hazardous fuels. Treatment priority areas will be where riparian areas are non-functional, functioning at risk with a downward trend, or dominated by invasive plant species.
MA-RP-04	A combination of wildland fire, fire use, prescribed fire, chemical, mechanical, and biological treatment methods can be used as appropriate within land use allocations and areas managed to maintain wilderness characteristics.
MA-RP-05	Prior to conducting vegetation treatments in the Riparian Ecological Zone, the area's ability to serve as habitat for special status species will be evaluated. Treatments will not be authorized in occupied, SW flycatcher habitat unless such treatments will provide long-term benefits to the species or their habitat, will reduce fire frequency or intensity, or will provide replacement habitat of a higher quality than that removed.
MA-RP-06	Up to 100 BLM acres and 10 NPS acres of Riparian Ecological Zone will be treated over the life of this Approved Plan (approx. 50% of available habitat).
Wildland Fire	
MA-FM-01	On BLM-administered lands, based on total acres burned by wildland fires from 1984-2003, no wildland fires are anticipated during the life of the Approved Plan. Because this ecological zone contains flammable fuels, wildland fires may occur during the life of the Approved Plan. It is unknown how proposed vegetation treatments will affect total acres burned by wildland fires.
MA-FM-02	No post-fire rehabilitation is anticipated. If wildland fires occur, post-fire rehabilitation may be implemented to meet DFCs.

TABLE 2.3. VEGETATION AND FIRE AND FUELS MANAGEMENT (VM, FM, RP)	
Decision #	**Decision Text**
	On NPS-administered lands, 52,670 acres will be managed as Fire Suppression as designated in the Fire Management Plan.
C. IMPLEMENTATION DECISIONS	
Pakoon Springs Restoration	
IMPL-RP-01	• The functions and processes of Pakoon Springs can be restored to a combination of naturally appearing pond and flowing water habitats that meet Rangeland Health Standards. • Relict leopard frogs, Grand Wash springsnails, or other special status species can be re-introduced to the area provided suitable habitat exists after restoration. • The processes of restoring previously developed Mojave Desert springs, and the function of Mojave Desert springs for wildlife, indigenous people, and the historic ranching activity, can be developed for interpretation. • Facilities to house the interpretive materials and enhance the visitor experience, including picnicking, can be provided. • Adequate protection (barriers, etc.) to ensure restoration efforts are not adversely impacted by visitors can be installed.
Tassi Ranch and Springs Restoration	
IMPL-RP-02	Components of the historic irrigation system will be maintained, allowing for preservation of Grand Wash Springsnail, an endemic species.
IMPL-RP-03	The spring will be considered for use as an introduction site for relict leopard frog.
IMPL-RP-04	The genetic integrity of cottonwood trees will continue to be maintained.
IMPL-RP-05	A site management plan for the spring, irrigation system, riparian area and ranch structures/historic landscape will be prepared to include: • Conservation treatments for the historic building and irrigation structures; • Vegetation management and spring restoration for ecological benefits including rare species conservation; • Maintenance of the cultural landscape; • Interpretation of the biological, hydrologic, and cultural features of the area, including visitor use management needs.
Cane Springs Restoration	
IMPL-RP06	Grazing and all associated facilities in the Cane Spring Pasture of the Mud and Cane allotment will be managed so that riparian resources are in or moving toward proper functioning condition. Management will complement maintenance of riparian wildlife habitat, pre-historic and historic resources, and future recreation use.
IMPL-RP-07	A site management plan for the spring, riparian area, and cultural resources will be prepared that will include the development and implementation of: 1) Interpretation to provide information on the native riparian vegetation and to emphasize the function of Mojave Desert springs for wildlife, indigenous people, and the historic and current ranching activity. 2) Interpretive trail and facility development to house the interpretive materials and enhance visitor experience, including picnicking.

TABLE 2.3. VEGETATION AND FIRE AND FUELS MANAGEMENT (VM, FM, RP)	
Decision #	**Decision Text**
	3) Adequate protection (barriers, etc.) to ensure restoration efforts and cultural resources are not adversely impacted by visitors.
PONDEROSA PINE ECOLOGICAL ZONE	
A. DESIRED FUTURE CONDITIONS	
DFC-VM-09	The Ponderosa Pine Ecological Zone will consist of a mosaic of tree densities, age classes, and openings (which may contain scattered trees), with healthy, diverse under stories of native shrubs, grasses, and forbs (see Map2.3).
DFC-VM-10	Ponderosa pine vegetation communities will be resilient to natural or human-caused disturbances, and losing key wildlife habitat components to wildfire will be minimized.
DFC-VM-11	There will be no net loss of total acres within the ponderosa pine plant communities (i.e., long-term or permanent removal from the landscape). A no net loss objective will not preclude restoration, rehabilitation, or related management actions.
DFC-VM-12	Patches of old and/or large trees and standing and fallen dead trees will be maintained and protected.
DFC-VM-13	In addition to the above, Ponderosa pine communities on NPS-administered lands will retain ecological integrity where natural processes maintain native plants and plant communities and are the principal influence on community and population fluctuation.
B. MANAGEMENT ACTIONS	
MA-VM-16	Vegetation treatments can be used in the Ponderosa Pine Ecological Zone to enhance vegetative diversity, restore native plant communities, maintain or increase wildlife habitat, and reduce or eliminate hazardous fuels. Treatment objectives in ponderosa pine vegetation communities will focus on restoring natural disturbance processes such as fire; increasing vegetative ground cover of native grasses, forbs, and shrubs; enhancing forest structure, function, and composition; and removing invasive, non-native species.
MA-VM-17	Stands of ponderosa pine will be managed for a balanced mosaic between tree, shrub, and perennial grass cover to support a healthy ecosystem while providing habitat for Merriam's turkey, Kaibab squirrel, and mule deer. The mosaics will include stands of old-growth ponderosa to support white-breasted nuthatch; a component of Gambel oak with grass and forb understory to provide foraging habitat for mule deer; large openings of grasses, forbs, and shrubs to provide foraging habitat for raptors such as sharp-shinned hawk, northern goshawk, Coopers hawk, American kestrel, and red-tailed hawk; and areas of sparse to dense tree canopy cover with an understory of grasses, forbs, and shrubs to provide nesting habitat for Merriam's turkey, hiding cover for mule deer, and habitat for Kaibab squirrel. (See Wildlife and Fish decisions.)
MA-VM-18	Up to 13,800 BLM acres and 7,000 NPS acres of Ponderosa Pine Ecological Zone will be treated over the life of this Approved Plan (approx. 75% of available habitat).
Wildland Fire	
MA-FM-03	On BLM and NPS-administered lands, based on total acres burned by wildland fires from 1984-2003, approx. 3,104 acres of wildland fires are anticipated during the life of this Plan. Because the size of individual wildland fires and number of annual fires can vary greatly, this estimate can be exceeded. It is unknown how proposed vegetation treatments will affect total acres burned by wildland fires.

TABLE 2.3. VEGETATION AND FIRE AND FUELS MANAGEMENT (VM, FM, RP)	
Decision #	**Decision Text**
MA-FM-04	Up to 3,104 acres of post-fire rehabilitation are anticipated to meet DFCs. Additional post-fire rehabilitation may be implemented if wildland fires and fire use exceed the estimated acreage.
	On NPS-administered lands, all acres can be considered for Wildland Fire Use, prescribed fire, fire suppression, and mechanical and chemical treatment to achieve resource objectives, consistent with land use allocations, minimum tool requirement for proposed wilderness, and to protect Monument values .
C. IMPLEMENTATION DECISIONS	
Mt. Trumbull Ponderosa Pine Restoration	
IMPL-VM-01	Implementation of ponderosa pine research treatments will be completed at Mt. Trumbull. Future treatments will focus on mimicking the natural disturbance regime.
IMPL-VM-02	Treatment emphasis will be in areas where ponderosa pine density exceeds the relative amount of "similar" for the applicable structural stage, patch size exceeds 200 acres, or cover of native grasses, and forbs is less than 5%.
IMPL-VM-03	Treatment preference will be to use a combination of wildland fire, fire use, prescribed fire, mechanical, or chemical methods consistent with land use allocation and minimum tool requirement for designated and proposed wilderness areas.
Mt. Trumbull Wilderness Ponderosa Pine Restoration	
IMPL-VM-04	Minimum tool policy emphasizing hand tools will be used in the wilderness area to suppress wildfires. Aircraft and other suppression methods can be used in emergencies, if approved by the BLM authorized officer.
IMPL-VM-05	Prescribed fire will be allowed in the wilderness area to restore ecological conditions, provided wilderness values are enhanced. Wilderness policy, including a minimum requirements analysis, will be followed in the final design of all restoration projects.
IMPL-VM-06	The BLM will use prescribed fire and/or fire use on up to 6,000 acres within the Mt. Trumbull Wilderness over the life of the Plan for the purpose of restoring ecological conditions and functions and reducing fuel hazards.
IMPL-VM-07	The BLM will limit prescribed burning to appropriate conditions in order to decrease the likelihood of crown fires; the objective will be to remove brush and small diameter trees while maintaining, or contributing to the restoration of, the structure and composition of old-growth forest stands.
IMPL-VM-08	Using a minimum requirement analysis, the BLM can use appropriate tools to construct minimal control lines, including the removal of trees and brush, and will rehabilitate these control lines upon completion of burning. In the analysis, BLM will consider how to deliver and remove personnel, equipment, and supplies during treatment operations.
IMPL-VM-09	The BLM will apply native seed manually and/or aerially, as appropriate.
IMPL-VM-10	The BLM will protect old-growth forest stands by raking around their bases, constructing interior control lines, and using minimum tools to fell and buck small-diameter trees and brush that constitute "ladder fuels," which directly threatens old-growth forest stands.

TABLE 2.3. VEGETATION AND FIRE AND FUELS MANAGEMENT (VM, FM, RP)	
Decision #	**Decision Text**
GREAT BASIN ECOLOGICAL ZONE (SAGEBRUSH COMMUNITIES: VM)	
A. DESIRED FUTURE CONDITIONS	
DFC-VM-14	Sagebrush (primarily *Artemisia tridentata*) communities will consist of a healthy, diverse mosaic of different height and age structures with a thriving community of native grasses and forbs. Mosaics may include stands of young and old sagebrush, openings (ranging from bare ground to short or sparse vegetation to high-density grasslands), wet meadows, seeps, healthy streamside (riparian) vegetation, and other interspersed shrub and woodland habitats (see Map 2.3).
DFC-VM-15	There will be no net loss of total acres within sagebrush communities (i.e., long-term or permanent removal from the landscape). A no net loss objective will not preclude restoration, rehabilitation, or related management actions.
DFC-VM-16	Treatment objectives in sagebrush communities will focus on restoring natural disturbance processes, such as by using fire, increasing vegetative ground cover of native grasses and forbs, and removing invasive non-native plants.
DFC-VM-17	Sagebrush communities on NPS-administered lands will retain ecological integrity where natural processes maintain native plants and plant communities and are the principal influence on community and population fluctuation
DFC-VM-18	Existing stands of sagebrush will have a balance between shrub and perennial grass cover, for open to moderate shrub canopy cover (5 to 25%), and multiple height classes. This mosaic will include young, sparse stands to support Vesper sparrows and lark sparrows, and older, dense stands to benefit Brewer's sparrows, sage sparrows, black-throated sparrows, gray flycatchers, and sage thrashers.
DFC-VM-19	Sagebrush communities will include small, grassy openings to support long-billed curlews and burrowing owls.
DFC-VM-20	Sagebrush communities will include large, continuous blocks (≥300 acres) of unfragmented sagebrush habitat, including mosaics of open to moderate shrub canopy cover (5 to 25%) and multiple age and height classes to benefit sage-dependent species.
DFC-VM-21	Sagebrush communities will include openings of short vegetation surrounded by sagebrush for ground foraging by sage thrashers, loggerhead shrikes, Brewer's sparrows, and sage sparrows.
DFC-VM-22	Sagebrush communities will include openings of short vegetation (2 to 8 in.) with wide visibility to provide breeding habitat for long-billed curlews, and burrowing owls. (See Wildlife and Fish decisions.)
DFC-VM-23	Sagebrush communities will include native grass and forb cover in balance with open to moderate (5 to 25%) shrub canopy cover and within ecological site potential. Perennial grass components will be at or above 10%. Native forb composition will be at or above 5%.
DFC-VM-24	Fragmentation of sagebrush habitat will be less than 50% of the treatment area.
B. MANAGEMENT ACTIONS	
MA-VM-19	Vegetation treatments can be used in the Great Basin Ecological Zone to enhance vegetative diversity, restore native plant communities, maintain or increase wildlife habitat, and reduce or eliminate hazardous fuels. Treatment priority areas will be where sagebrush canopy cover exceeds 20%, perennial grasses and forbs are less than 5%, and bare ground exceeds 40%.
MA-VM-20	A combination of wildland fire, fire use, prescribed fire, and chemical treatment methods will be used in preference to, but not to the exclusion of, other available tools in the Great Basin Ecological Zone sagebrush communities.

TABLE 2.3. VEGETATION AND FIRE AND FUELS MANAGEMENT (VM, FM, RP)	
Decision #	**Decision Text**
MA-VM-21	Up to 25,000 BLM acres of sagebrush habitat can be treated over the life of this Approved Plan (approx. 15% of available habitat).
Wildland Fire	
MA-FM-05	On BLM and NPS-administered lands, based on total acres burned by wildland fires from 1984-2003, approximately 20,961 acres of wildland fires are anticipated during the life of the Approved Plan. Because the size of individual wildland fires and the number of annual fires can vary greatly, this estimate can be exceeded. It is unknown how proposed vegetation treatments will affect total acres burned by wildland fires in the Great Basin sagebrush communities.
MA-FM-06	Up to 21,000 acres of post-fire rehabilitation are anticipated to meet DFCs. Additional post-fire rehabilitation may be implemented if wildland fires and fire use exceed the estimated acreage.
	On NPS-administered lands, all acres can be considered for Wildland Fire Use, prescribed fire, fire suppression, and mechanical and chemical treatments to achieve resource objectives, consistent with land use allocations, minimum tool requirement for NPS proposed wilderness, and to protect Monument values.
GREAT BASIN ECOLOGICAL ZONE (PINYON-JUNIPER COMMUNITY: VM)	
A. DESIRED FUTURE CONDITIONS	
DFC-VM-25	Healthy, diverse woodland communities will consist of a mosaic of trees, shrubs, grasses, and forbs. Mosaic patches can include stands of young and old pinyon-juniper, openings, wet meadows, seeps, and other interspersed shrub habitats. The communities will be composed of a variety of different height structures and age classes, with a thriving understory community of native grasses, forbs, and shrubs (see Map 2.3).
DFC-VM-26	To reduce the threat of catastrophic fire, ladder fuels and downed woody debris will be limited or not present. Woody debris will be present to stabilize soil and enhance vegetation recovery in restoration areas.
DFC-VM-27	Treatment objectives in the pinyon-juniper vegetation communities will focus on restoring the natural disturbance regime; increasing vegetative ground cover of native grasses, forbs, and shrubs; and removing non-native invasive species.
DFC-VM-28	Stands of pinyon-juniper will include a balance between tree, shrub, and perennial grass cover to support pinyon jay and mule deer. This mosaic will include stands of old growth pinyon-juniper to support juniper titmouse; large openings of grasses, forbs and shrubs to support mule deer and provide foraging habitat for raptors such as sharp-shinned hawk, northern goshawk, Coopers hawk, American kestrel, and red-tailed hawk; and areas of sparse to dense tree canopy cover to support pinyon jay. (See Wildlife and Fish decisions.)
DFC-VM-29	Individual old growth trees will be present and will be protected during treatment implementation.
B. MANAGEMENT ACTIONS	
MA-VM-22	Vegetation treatments can be used in the Great Basin Ecological Zone to enhance vegetative diversity, restore native plant communities, maintain or increase wildlife habitat, and reduce or eliminate hazardous fuels. Treatment priority areas will be where juniper canopy cover exceeds 40%, perennial grasses and forbs are less than 5%, and bare ground exceeds 50%.

TABLE 2.3. VEGETATION AND FIRE AND FUELS MANAGEMENT (VM, FM, RP)	
Decision #	**Decision Text**
MA-VM-23	Treatment preferences will be to use a combination of wildland fire, fire use, prescribed fire, mechanical, and chemical methods.
MA-VM-24	Up to 102,000 BLM acres and 34,000 NPS acres of pinyon-juniper habitat can be treated over the life of this Approved Plan (approx. 50% of available habitat).
Wildland Fire	
MA-FM-07	On BLM and NPS-administered lands, based on total acres burned by wildland fires from 1984-2003, approximately 9,797 acres of wildland fires are anticipated during the life of the Approved Plan. Because the size of individual wildland fires and the number of annual fires can vary greatly, this estimate can be exceeded. It is unknown how proposed vegetation treatments will affect total acres burned by wildland fires.
MA-FM-08	Up to 9,797 acres of post-fire rehabilitation are anticipated to meet DFCs. Additional post-fire rehabilitation may be implemented if wildland fires and fire use exceed the estimate
	On NPS-administered lands, all acres can be considered for Wildland Fire Use, prescribed fire, fire suppression, and mechanical and chemical treatment to achieve resource objectives consistent with land use allocations, minimum tool requirement for proposed wilderness, and to protect Monument values.
MOJAVE DESERT ECOLOGICAL ZONE (VM)	
A. DESIRED FUTURE CONDITIONS	
DFC-VM-30	Endemic plant species and associated communities such as creosote bush, Joshua tree, Mojave yucca and cacti, will be present along with other shrubs, grasses, and wildflowers. These communities can include stands of young and old shrubs, sparse vegetation, scattered to larger expanses of creosote bush or Joshua trees, seeps, healthy streamside (riparian) vegetation, and other interspersed grassland and shrub habitats (see Map 2.3).
DFC-VM-31	Endemic animal species such as desert tortoise and chuckwalla will be present and thriving with more than adequate food, water, and cover resources (see Map 2.6).
DFC-VM-32	There will be no net loss of acres of Mohave Desert plant communities (i.e., long-term or permanent removal from the landscape). A no net loss objective will not preclude restoration, rehabilitation, or related management actions.
DFC-VM-33	Treatment emphasis will be to reduce the proliferation of non-indigenous annual plant species, reduce fire intensity and frequency, and improve tortoise structural and forage habitat components.
B. MANAGEMENT ACTIONS	
MA-VM-25	Vegetation treatments can be used in the Mojave Desert Ecological Zone to enhance vegetative diversity, restore native plant communities, maintain or increase wildlife habitat, and reduce or eliminate hazardous fuels. Treatment priority areas will be where desert tortoise habitat has been burned and/or converted to invasive annual grass communities.

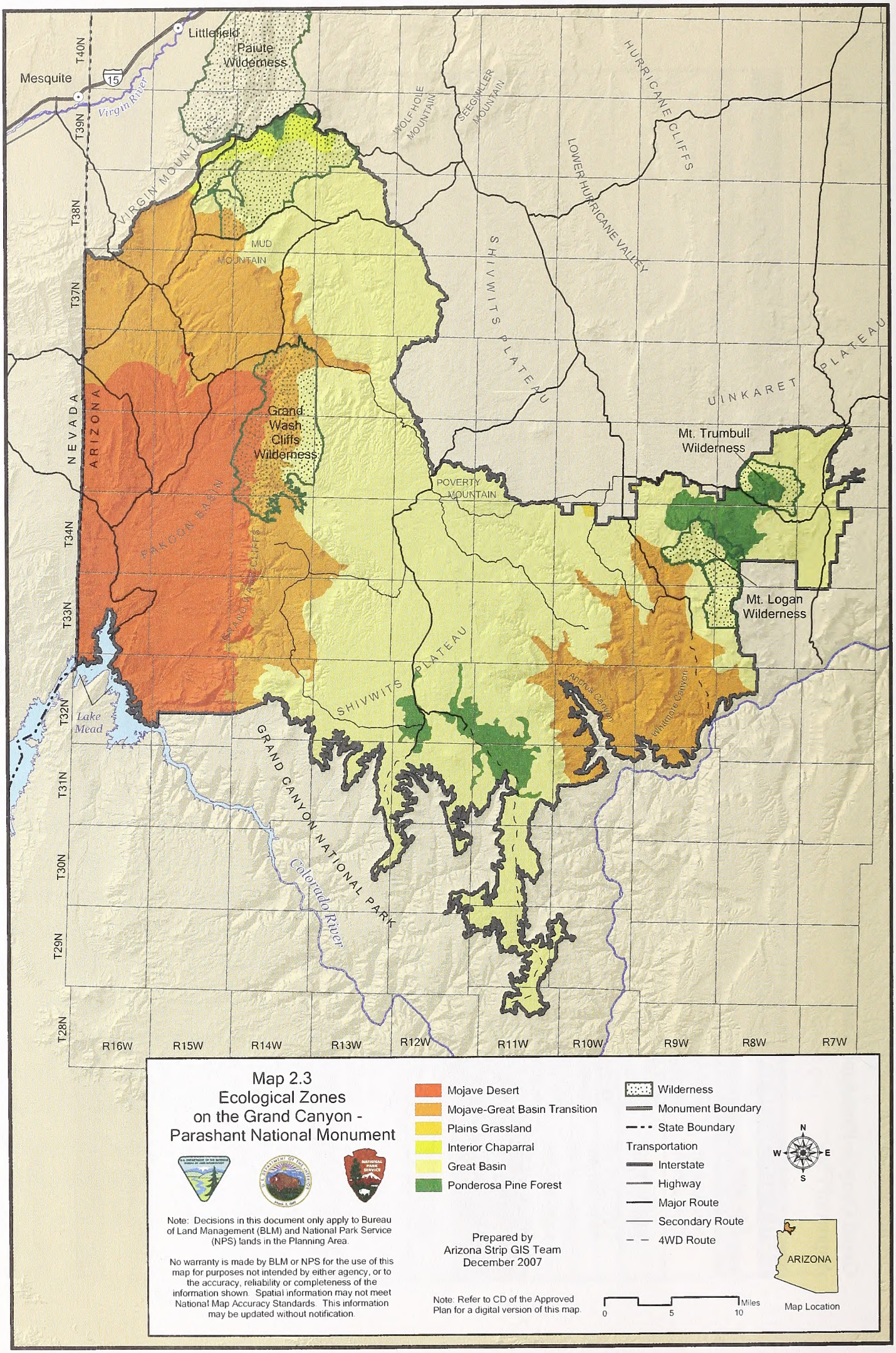
TABLE 2.3. VEGETATION AND FIRE AND FUELS MANAGEMENT (VM, FM, RP)	
Decision #	**Decision Text**
MA-VM-26	Treatment preference will be to use chemical methods. Prescribed fire and mechanical treatment methods will only be authorized where doing so will benefit desert tortoise or their habitat, reduce invasive plant species, reduce fire frequency or intensity by removing hazardous or flashy fuels, or be necessary for research.
MA-VM-27	Up to 70,000 BLM acres of Mojave Desert Ecological Zone will be treated over the life of this Approved Plan. Up to 100 acres may be treated with prescribed fire on BLM-administered lands if associated with scientific research.
Wildland Fire	
MA-FM-09	On BLM and NPS-administered lands, based on total acres burned by wildland fires from 1984-2003, approximately 22,889 acres of wildland fires are anticipated during the life of the Approved Plan. Because the size of individual wildland fires and the number of annual fires can vary greatly, this estimate may be exceeded. It is unknown how proposed vegetation treatments will affect total acres burned by wildland fires in the Mojave Desert Ecological Zone.
MA-FM-10	Up to 50,000 acres of post-fire rehabilitation are anticipated to meet DFCs. Additional post-fire rehabilitation may be implemented if wildland fires exceed the estimated acreage.
	On NPS-administered lands, all Mojave Desert Ecological Zone acres will be managed as Fire Suppression as designated in the Fire Management Plan utilizing the appropriate Management Response method. All acres can be considered for Mojave Desert Ecological Zone restoration, strategically applying mechanical and chemical treatment for invasive plant control, endangered species habitat restoration/protection, or to restore more natural fire regimes and fire frequency. All treatments will be consistent with land use allocations, and minimum tool requirements for proposed wilderness, and to protect Monument values.
MOJAVE-GREAT BASIN TRANSITION ECOLOGICAL ZONE	
A. DESIRED FUTURE CONDITIONS	
DFC-VM-34	Endemic plant species and associated communities such as black brush, Joshua tree, Mojave yucca, and cacti will be present along with other shrubs, grasses, and wildflowers. These communities can include stands of young and old shrubs, sparse vegetation, scattered to larger expanses of black brush to various mixes of black brush, Joshua trees, pinyon-juniper, yucca, and shrub habitats.
DFC-VM-35	Endemic animal species such as desert tortoise, chuckwalla, and desert bighorn sheep will be present and thriving with more than adequate food, water, and cover resources (see Map 2.3).
DFC-VM-36	Priority plant species and associated communities such as black brush, Joshua tree, Mojave yucca, and cacti will be present along with other shrubs, grasses, and wildflowers. These communities can include stands of young and old shrubs, sparse vegetation, scattered to larger expanses of black brush to various mixes of black brush, Joshua trees, pinyon-juniper, yucca, and shrub habitats.
DFC-VM-37	There will be no net loss in acres of Transition plant communities (i.e., long-term or permanent removal from the landscape). A no net loss objective will not preclude restoration, rehabilitation, or related management actions.
DFC-VM-38	Management of Mohave-Great Basin Transition Ecological Zone plant communities will focus on removing invasive non-native plants, especially cheatgrass, Sahara mustard, and red brome, and preventing habitat degradation due to wildfire.

TABLE 2.3. VEGETATION AND FIRE AND FUELS MANAGEMENT (VM, FM, RP)	
Decision #	**Decision Text**
B. MANAGEMENT ACTIONS	
MA-VM-28	Prescribed fire and mechanical treatment methods will only be authorized on BLM-administered lands where doing so will reduce invasive plant species or fire frequency and/or intensity by removing hazardous fuels, or will be done for research.
MA-VM-29	Vegetation treatments can be used in the Mojave-Great Basin Transition Ecological Zone to enhance vegetative diversity, restore native plant communities, maintain or increase wildlife habitat, and reduce or eliminate hazardous fuels. Treatment priority areas will be for protection of unburned desert tortoise habitat and restoration and rehabilitation of habitat previously burned and/or converted to invasive, annual grass communities.
MA-VM-30	Chemical treatment methods will be used in preference to, but not to the exclusion of, other available tools in the Mojave-Great Basin Transition Ecological Zone.
MA-VM-31	Up to 150,000 BLM acres of Mojave-Great Basin Transition Ecological Zone can be treated over the life of this Approved Plan. Up to 100 acres may be treated with prescribed fire on BLM-administered lands if associated with scientific research.
Wildland Fire	
MA-FM-11	On BLM and NPS-administered lands, based on total acres burned by wildland fires from 1984-2003, approximately 100,000 acres of wildland fires are anticipated during the life of the Approved Plan. Because the size of individual wildland fires and the number of annual fires can vary greatly, this estimate may be exceeded. It is unknown how proposed vegetation treatments will affect total acres burned by wildland fires in the Mojave-Great Basin Transition Ecological Zone.
MA-FM-12	Up to 100,000 acres of post-fire rehabilitation are anticipated to meet DFCs. Additional post-fire rehabilitation may be implemented if wildland fires exceed the estimated acreage.
	On NPS-administered lands, the Andrus Plain area is currently described as Mojave Transition. All acres can be considered for Wildland Fire Use, prescribed fire, fire suppression, and mechanical and chemical treatment to achieve resource objectives, consistent with land use allocations, minimum tool requirement for proposed wilderness, and to protect Monument values.
INTERIOR CHAPARRAL ECOLOGICAL ZONE	
A. DESIRED FUTURE CONDITIONS	
DFC-VM-39	The Interior Chaparral Ecological Zone will consist of diverse populations of endemic vegetative species, particularly shrubs, and a mosaic of age class distributions of these species (see Map 2.3).
DFC-VM-40	Endemic plant species and associated communities such as manzanita, silk tassel, and live oak will be present, along with other shrubs, grasses, and forbs.
DFC-VM-41	Endemic animal species such as black-chinned sparrow and mule deer will be present and thriving with more than adequate food, water, and cover resources.
DFC-VM-42	There will be no net loss of acres of Interior Chaparral plant communities (i.e., long-term or permanent removal from the landscape). A no net loss objective will not preclude restoration, rehabilitation, or related management actions.

TABLE 2.3. VEGETATION AND FIRE AND FUELS MANAGEMENT (VM, FM, RP)	
Decision #	**Decision Text**
B. MANAGEMENT ACTIONS	
MA-VM-32	Vegetation treatments can be used in the Interior Chaparral Ecological Zone to enhance vegetative diversity, restore native plant communities, maintain or increase wildlife habitat, and reduce or eliminate hazardous fuels. Treatment objectives will focus on providing for shrub regeneration, wildlife access for cover and browse, and exclusion of invasive non-native plants.
MA-VM-33	Mechanical or chemical treatment methods will be used to create openings and to achieve DFCs, in preference to, but not to the exclusion of, other available tools
MA-VM-34	Up to 1,500 BLM acres of Interior Chaparral Ecological Zone will be treated over the life of this Approved Plan (approx. 15% of available habitat).
Wildland Fire	
MA-FM-13	Based on total acres burned by wildland fires from 1984-2003, approximately 877 acres of wildland fires are anticipated during the life of the Approved Plan. Because the size of individual wildland fires and the number of annual fires can vary greatly, this estimate may be exceeded. It is unknown how proposed vegetation treatments will affect total acres burned by wildland fires (see Map 2.4).
MA-FM-14	Up to 877 acres of post-fire rehabilitation are anticipated to meet DFCs. Additional post-fire rehabilitation may be implemented if wildland fires and fire use exceed the estimated acreage.
PLAINS-GRASSLAND ECOLOGICAL ZONE	
A. DESIRED FUTURE CONDITIONS	
DFC-VM-43	Endemic plant species and associated communities such as galleta, sand dropseed, Indian ricegrass, blue grama, black grama, needle and thread grass, four-wing saltbush, shadescale, winterfat, and Mormon tea will be present, along with other shrubs, grasses, and forbs.
DFC-VM-44	Endemic animal species such as pronghorn antelope, Cassin's sparrow, and Brewer's sparrow will be present and thriving with more than adequate food, water, and cover resources.
DFC-VM-45	Grassland plant communities will be managed for no net loss (i.e., long-term or permanent removal from the landscape).
DFC-VM-46	A no net loss objective will not preclude restoration, rehabilitation, or related management actions.
DFC-VM-47	The Plains-Grassland Ecological Zone habitats will include a mosaic of grassland and shrub communities, varying age structure, sparse vegetation, scattered to larger expanses of separate grassland or shrub communities, or various mixes of these communities. (See Wildlife and Fish decisions.)
B. MANAGEMENT ACTIONS	
MA-VM-35	Vegetation treatments can be used in the Plains-Grassland Ecological Zone to enhance vegetative diversity, restore native plant communities, maintain or increase wildlife habitat, and reduce or eliminate hazardous fuels. Treatment emphasis will be to reduce the proliferation of non-indigenous, annual plants and improve pronghorn antelope habitat consistent with site potential (see Wildlife and Fish decisions).

TABLE 2.3. VEGETATION AND FIRE AND FUELS MANAGEMENT (VM, FM, RP)	
Decision #	**Decision Text**
MA-VM-36	Use of prescribed fire will be authorized where doing so will benefit priority species or their habitat or will reduce fire frequency or intensity by removing hazardous fuels, consistent with land use allocations and minimum tool requirement for designated and proposed wilderness.
MA-VM-37	Treatment priority areas in the Plains-Grassland Ecological Zone will be where grasses and forbs are less than 5% and bare ground exceeds 45%.
MA-VM-38	Mechanical, chemical, or biological treatment methods will be used in preference to, but not to the exclusion of, other available tools in the Plains-Grassland Ecological Zone.
MA-VM-39	Up to 110 BLM acres of Plains-Grassland Ecological Zone can be treated over the life of this Approved Plan (approx. 13% of available habitat).
Wildland Fire	
MA-FM-15	Based on total acres burned by wildland fires from 1984-2003, no wildland fires are anticipated during the life of the Approved Plan. Because this is a fire-adapted Ecological Zone, wildland fires may occur during the life of the Approved Plan. It is unknown how proposed vegetation treatments will affect total acres burned by wildland fires.
MA-FM-16	No post-fire rehabilitation is anticipated. If wildland fires and fire use occur, post-fire rehabilitation may be implemented to meet DFCs.

Map 2.3 Ecological Zones on the Grand Canyon - Parashant National Monument



Map 2.3
Ecological Zones on the Grand Canyon - Parashant National Monument

- Mojave Desert
- Mojave-Great Basin Transition
- Plains Grassland
- Interior Chaparral
- Great Basin
- Ponderosa Pine Forest

- Wilderness
- Monument Boundary
- State Boundary

Transportation
- Interstate
- Highway
- Major Route
- Secondary Route
- 4WD Route

N W E S

ARIZONA
Map Location

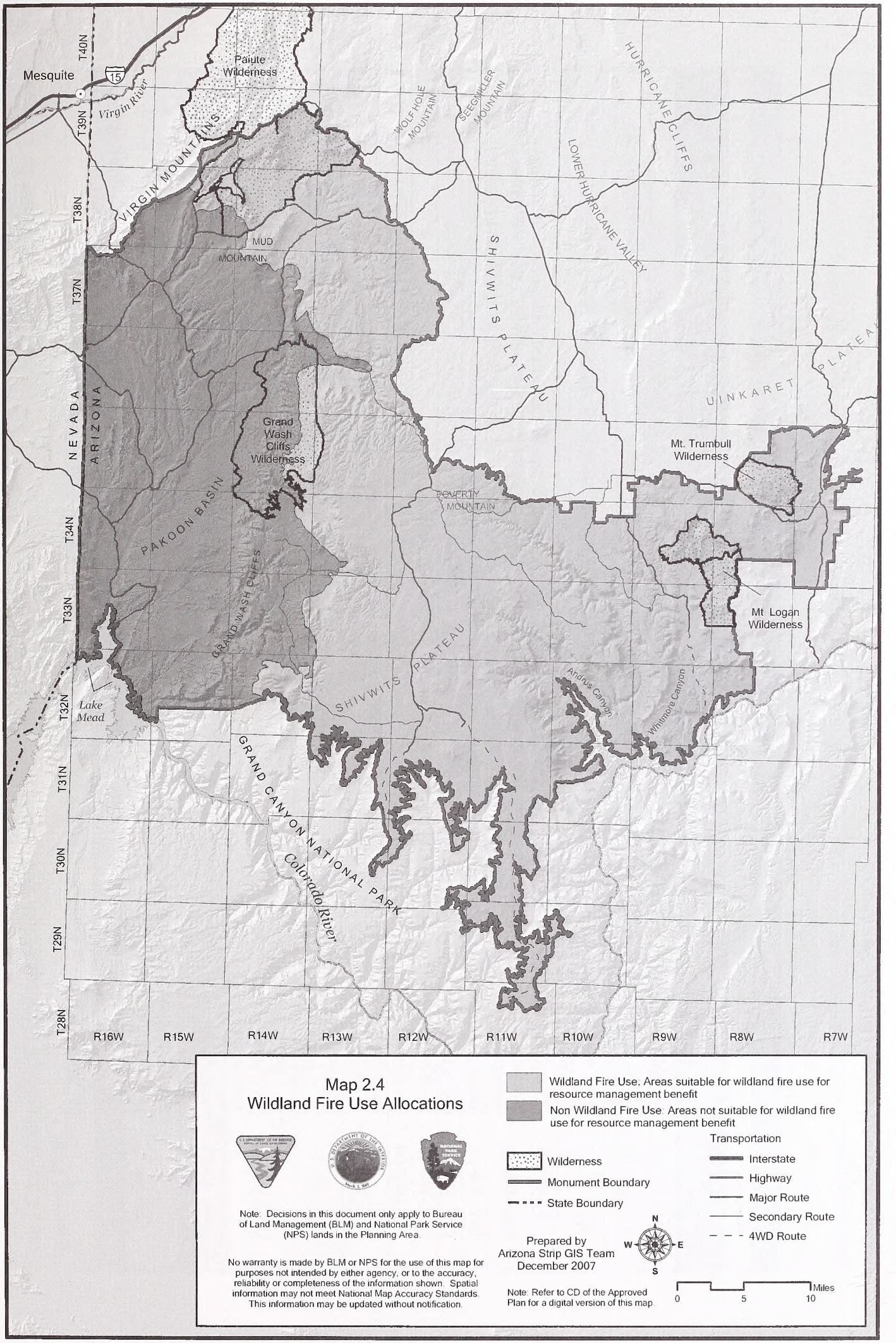
Note: Decisions in this document only apply to Bureau of Land Management (BLM) and National Park Service (NPS) lands in the Planning Area.

No warranty is made by BLM or NPS for the use of this map for purposes not intended by either agency, or to the accuracy, reliability or completeness of the information shown. Spatial information may not meet National Map Accuracy Standards. This information may be updated without notification.

Prepared by
Arizona Strip GIS Team
December 2007

Note: Refer to CD of the Approved Plan for a digital version of this map.

0 5 10 Miles



Map 2.4 Wildland Fire Use Allocations

TABLE 2.4. WILDLIFE AND FISH (WF)	
Decision #	**Decision Text**
GENERAL WILDLIFE AND FISH	
A. DESIRED FUTURE CONDITIONS	
DFC-WF-01	Ecological conditions will be within the range of natural variability and will be functional for dependant animal species.
DFC-WF-02	Native wildlife communities, as Monument objects, will be protected. A complete range of diverse, healthy, and self-sustaining populations of native animal species will occupy all available suitable habitats.
DFC-WF-03	Forage, water, cover, and space will be available to wildlife of sufficient quantity and quality to support productive and diverse wildlife populations.
DFC-WF-04	All waters will be safely accessible to wildlife.
DFC-WF-05	Fences will be the minimum necessary for effective livestock control or other administrative purposes. Fences will be wildlife passable, consistent with the species found in the area.
DFC-WF-06	Habitat connectivity and wildlife movement between ecological zones will be maintained.
DFC-WF-07	Adverse impacts to wildlife and wildlife resources will be avoided or mitigated.
DFC-WF-08	Predators will be recognized as an important component of plant and animal communities.
DFC-WF-09	Human/wildlife conflicts will be avoided, resolved, or mitigated.
DFC-WF-10	On BLM-administered lands, management of game and nongame species by Arizona Game and Fish Department (AGFD) will be consistent with AGFD Strategic Plans and other appropriate guidelines.
DFC-WF-11	On NPS-administered lands, wildlife management will be consistent with AGFD Strategic Plans, as applicable within NPS management policies.
DFC-WF-12	The natural biological diversity of fish, wildlife, and plant species will be maintained or, where necessary and feasible, restored throughout the Monument. Habitats will be managed on an ecosystem basis, ensuring that all parts of the ecosystem and natural processes are functional.
B. MANAGEMENT ACTIONS	
Priority Species and Habitats	
MA-WF-01	Management emphasis and priority will be given to priority species and habitats in conflict resolution. Priority species include the following: • All special status wildlife species known or suspected to occur in the area. Special status species include those that are federally listed, proposed, or candidate species; species for which there is a signed conservation agreement or strategy; all species referenced in AGFD's Wildlife Species of Concern in Arizona document; and species included on the Arizona BLM and NPS sensitive list.

TABLE 2.4. WILDLIFE AND FISH (WF)	
Decision #	**Decision Text**
	• All species of migratory birds known or suspected to occur within the Monument. • All game mammals including: mule deer, pronghorn antelope, desert bighorn sheep, mountain lion, Kaibab squirrel, and desert cottontail rabbit. • Game birds including Merriam's turkey, Gambel's quail, white-winged dove, mourning dove, band-tailed pigeon, chukar partridge, and waterfowl. • The following carnivores: kit fox, gray fox, and long-tailed weasels. • Priority habitats include the following: • All aquatic and/or riparian areas, including springs, seeps, and man-made waters. These areas are important for all wildlife species, particularly native fish, and migratory birds. • All portions of the ponderosa pine ecological zone. This habitat is important for Merriam's Turkey and a variety of bats and migratory birds. It is also crucial summer range for mule deer. • All areas considered crucial mule deer winter range, including the Whitmore Canyon and Andrus Point. (See Map 2.5.) • All bighorn sheep habitat areas, including the Grand Wash Cliffs habitat area.
MA-WF-02	For BLM-administered lands, decisions and specific actions from this Approved Plan intended to benefit wildlife and fish resources will be implemented through the development and implementation of three interdisciplinary wildlife Habitat Management Plans (HMPs). These plans will be developed and maintained cooperatively with AGFD, U.S. Fish and Wildlife Service (USFWS), and other interested participants. HMP area boundaries will follow AGFD Game Management Units 13A and 13B. Implementation accomplishments will be monitored and reviewed annually and documented in HMP files. The HMPs will be amended or revised, as necessary, and will incorporate existing and new BLM and state strategies as applicable.
MA-WF-03	Activities that adversely affect breeding, feeding, or sheltering activities of priority wildlife species can be modified, mitigated, or otherwise restricted to minimize disturbance to the species.
MA-WF-04	On BLM-administered lands, recreational collecting of animals or animal parts (e.g. antlers, skulls, feathers, etc.) in ecologically non-sensitive areas will be allowed, assuming compliance with AGFD regulations. On NPS-administered lands, recreational collection of animal parts will not be authorized.
MA-WF-05	Access to public lands with wildlife and fish hunting and viewing opportunities will be maintained as determined in the route evaluation/designation process. Access to public lands with sensitive wildlife and/or fisheries resources can be closed or limited, where determined necessary through monitoring of resource conditions.
Wildlife Transplants and Augmentations	
MA-WF-06	Reintroductions, transplants, capture operations, and supplemental stockings (augmentations) of native wildlife populations into historic habitats will be carried out in collaboration with the AGFD and/or the USFWS where consistent with achieving DFCs, protection of Monument objects, and within applicable agencies policies. Restoration of native wildlife will be for the following purposes:

TABLE 2.4. WILDLIFE AND FISH (WF)	
Decision #	**Decision Text**
	• To maintain current populations, distributions, and genetic diversity; • To conserve or recover threatened or endangered species; and/or • To restore or enhance native populations, diversity, or distribution of special status species. Species that may be reintroduced, transplanted, or augmented include but are not limited to the following: pronghorn antelope, mule deer, desert bighorn sheep, Merriam's Turkey, Kaibab squirrel, and special status species.
Wildlife Enhancement Projects	
MA-WF-07	On BLM-administered lands, construction of wildlife habitat improvement projects, including water developments and vegetation treatments, can be authorized to meet DFCs, assuming compliance with NEPA, the Endangered Species Act (ESA), Monument proclamation, and other applicable laws, regulations, and policies. DPC objectives for wildlife will be incorporated into all habitat improvement projects including restoration and vegetation treatment projects. Specific projects will be listed in HMPs.
	New water developments for wildlife will not be authorized on NPS-administered lands. Vegetation treatments can be authorized to meet ecological objectives, including wildlife habitat management, assuming compliance with NEPA, ESA, Monument proclamations, and other applicable laws, regulations, and policies. DPC objectives for wildlife will be incorporated into all habitat improvement projects including restoration and vegetation treatment projects.
MA-WF-08	Existing vegetation treatment projects that benefit wildlife can be maintained.
MA-WF-09	Existing water developments will be modified to ensure wildlife have safe access to water. Existing water developments will be maintained to ensure reliability of the water. Maintenance of existing waters will generally take priority over new construction. Development of cooperative waters for livestock and wildlife will be encouraged where doing so will benefit wildlife, will be consistent with achieving DFCs, and will be economically efficient.
	On NPS-administered lands, existing water developments may be maintained, repaired, or replaced in-kind but increased development (size, scope, or disturbance) will not be authorized.
MA-WF-10	Escape ramps will continue to be maintained and, where needed, installed at all waters accessible to wildlife to minimize drowning hazards.
Animal Damage Control	
MA-WF-11	No members of the pig family (Suiidae) will be authorized on BLM or NPS-administered lands.
MA-WF-12	The Animal and Plant Health Inspection Service – Wildlife Services (APHIS-WS) will conduct predator control efforts in the Monument on an as needed basis. The BLM will request proactive control to benefit priority species, protect livestock, or enhance the success of planned wildlife transplants or augmentations.
	On NPS-administered lands, predator control will only take place in accordance with NPS policies, ensuring that animal removals do not interfere with natural habitats, natural abundances, natural distribution of native species, nor natural processes.

TABLE 2.4. WILDLIFE AND FISH (WF)	
Decision #	**Decision Text**
	Watchable Wildlife
MA-WF-13	The Mt. Trumbull area will continue to be managed as a Watchable Wildlife area.
MA-WF-14	The following areas will be identified, nominated, and managed as Watchable Wildlife areas: • Tassi Spring • Cane Spring • Pakoon Spring • Oak Grove
	MULE DEER
A. DESIRED FUTURE CONDITIONS	
DFC-WF-13	Mule deer habitat will provide the necessary forage, water, and shelter components for healthy, self-sustaining populations within the range of natural variability.
DFC-WF-14	On BLM-administered lands, mule deer populations will be at or near maximum levels sustainable for the habitat.
DFC-WF-15	On BLM-administered lands, forage in crucial summer mule deer habitat will include at least 10% grasses and forbs composition by weight (CBW) and at least 30% palatable browse species CBW at all key areas, where consistent with site potential.
DFC-WF-16	On BLM-administered lands, forage in crucial winter mule deer habitat will include at least 30% palatable browse species CBW at all key areas, where consistent with site potential.
DFC-WF-17	Mule deer habitat in pinyon-juniper woodland sites will include a healthy diverse mosaic of trees, shrubs, grasses, and forbs.
DFC-WF-18	Water sources within mule deer habitat will be safely accessible to deer and other wildlife.
DFC-WF-19	On BLM-administered lands, water sources within mule deer habitat will be spaced no more than 3 miles apart.
DFC-WF-20	All fences in mule deer habitat will be deer passable.
B. MANAGEMENT ACTIONS	
MA-WF-15	On BLM-administered lands, self-sustaining mule deer populations will be enhanced or maintained in Game Management Units 13A and 13B. Initial or supplemental transplants can be authorized on a case-by-case basis. Existing habitat areas can be expanded and new habitat areas may be added where consistent with protection of Monument objects and management unit objectives.
MA-WF-16	On BLM-administered lands, crucial summer mule deer habitat will be managed for at least 10% grasses and forbs and at least 30% palatable browse species CBW, where consistent with site potential. Crucial winter mule deer habitat will be managed to include at least 30% palatable browse species, where consistent with site potential. Palatable browse species will be maintained and enhanced through vegetation conversion. Palatable browse species can include, but is not limited to cliffrose, bitterbrush, ceanothus, four-wing saltbush, desert holly, Mormon tea, and mountain mahogany.

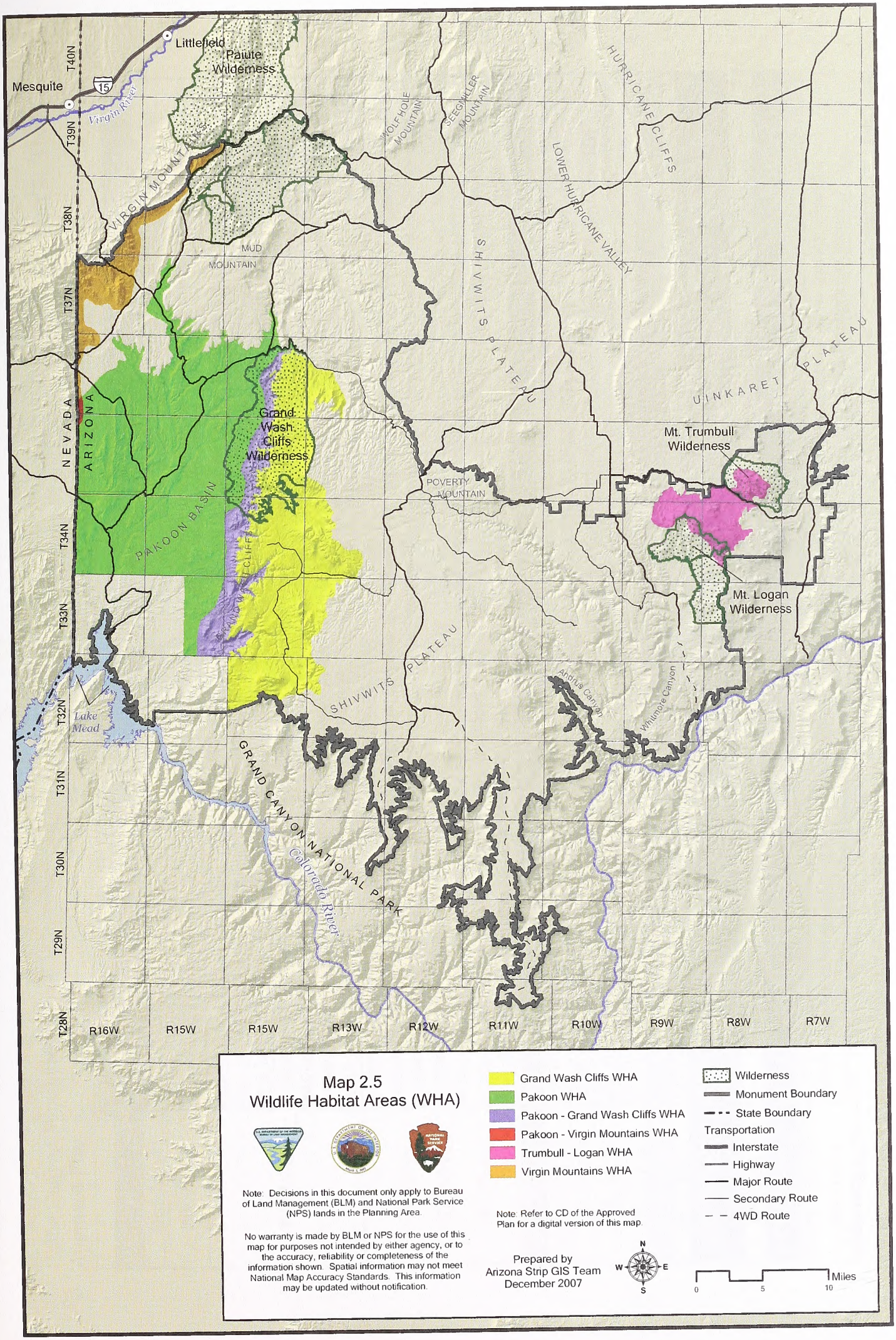
TABLE 2.4. WILDLIFE AND FISH (WF)	
Decision #	**Decision Text**
MA-WF-17	On BLM-administered lands, mule deer will be managed for healthy, self-sustaining populations in accordance with population goals and objectives established in the AGFD Strategic Plan for the species.
MA-WF-18	An HMP will be developed and implemented for mule deer habitat on BLM-administered lands in Game Management Units 13A and 13B, consistent with the AGFD Strategic Plan. Site-specific management actions will be included. The plan will be amended or revised as necessary. Implementation accomplishments will be monitored annually.
PRONGHORN ANTELOPE	
A. DESIRED FUTURE CONDITIONS	
DFC-WF-21	Pronghorn habitat will provide the necessary forage, water, and shelter components for healthy, self-sustaining populations within the range of natural variability.
DFC-WF-22	On BLM land, pronghorn antelope populations will be at or near maximum levels sustainable for the habitat.
DFC-WF-23	On BLM-administered lands, forage composition in pronghorn antelope habitat will include at least 20% grasses and forbs, and 20% palatable shrub species CBW at all key areas, where consistent with site potential.
DFC-WF-24	Where consistent with site potential on BLM-administered lands, the shrub component will be at least 15 inches tall at key fawning areas in pronghorn habitat to provide fawning cover.
DFC-WF-25	Water sources within pronghorn antelope habitat will be safely accessible to pronghorn and other wildlife.
DFC-WF-26	On BLM-administered lands, water sources within pronghorn antelope habitat will be spaced no more than 3 miles apart.
DFC-WF-27	All fences in pronghorn antelope habitat will be pronghorn passable and necessary for effective range management or other administrative functions.
B. MANAGEMENT ACTIONS	
MA-WF-19	On BLM-administered lands, self-sustaining pronghorn populations will be enhanced or maintained in Game Management Units 13A and 13B. Initial or supplemental transplants can be authorized on a case-by-case basis. Existing habitat areas can be expanded and new habitat areas may be added where appropriate.
MA-WF-20	On BLM-administered lands, pronghorn antelope will be managed for healthy, self-sustaining populations in accordance with population goals and objectives established in the AGFD Strategic Plan for the species.
MA-WF-21	The BLM will identify and map pronghorn fawning areas in the Monument. The BLM will implement actions to increase shrub height and density to enhance fawning cover, consistent with site potential.
MA-WF-22	On BLM-administered lands, pronghorn habitat will be managed for at least 20% grasses and forbs and at least 20% palatable browse species CBW, where consistent with site potential.
MA-WF-23	Fences in pronghorn antelope habitat will be modified to ensure they are passable to pronghorn. Fences not necessary for range management or other administrative purposes will be removed.

TABLE 2.4. WILDLIFE AND FISH (WF)	
Decision #	**Decision Text**
MA-WF-24	An HMP for pronghorn antelope on BLM-administered lands will be developed and implemented in Game Management Units 13A and 13B consistent with the AGFD Strategic Plan. Site-specific management actions will be included. The plan will be amended or revised as necessary. Implementation accomplishments will be monitored annually.
DESERT BIGHORN SHEEP	
A. DESIRED FUTURE CONDITIONS	
DFC-WF-28	Desert bighorn habitat will provide the necessary forage, water, and shelter components for healthy, self-sustaining populations within the range of natural variability.
DFC-WF-29	On BLM-administered Lands, desert bighorn sheep populations will be at or near maximum levels sustainable for the habitat.
DFC-WF-30	On BLM-administered lands, forage in desert bighorn sheep habitat areas will include at least 20% grasses, 20% forbs, and 20% palatable shrub species CBW, where consistent with site potential.
DFC-WF-31	Water sources within bighorn sheep habitat areas will be safely accessible to bighorn and other wildlife.
DFC-WF-32	On BLM-administered lands, water sources within bighorn sheep habitat will be spaced no more than 4 miles apart.
B. LAND USE ALLOCATION	
LA-WF-01	114,288 acres will be allocated as the Grand Wash Cliffs Wildlife Habitat Area (WHA) for desert bighorn sheep (see Map 2.5).
LA-WF-02	19,728acres will be allocated as the Virgin Mountains WHA for desert bighorn sheep.
C. MANAGEMENT ACTIONS	
MA-WF-25	On BLM-administered lands, desert bighorn sheep will be managed for healthy, self-sustaining populations in accordance with population goals and objectives established in the AGFD Strategic Plan for the species.
MA-WF-26	Implementation of site-specific actions benefiting bighorn sheep will be continued by implementing the Arizona Strip Desert Bighorn Sheep Management Plan (BLM and AGFD 2001) insofar as it is consistent with this Approved Plan. The desert bighorn sheep management plan will be amended or revised as necessary. Implementation accomplishments will be monitored annually. The plan will be amended to include NPS-administered lands, with any actions taken in compliance with NPS Management Policies regarding restoration of native species.
KAIBAB SQUIRREL	
A. DESIRED FUTURE CONDITIONS	
DFC-WF-33	Kaibab squirrel habitat will provide the necessary forage, water, and shelter components for healthy, self-sustaining populations within the range of natural variability.
DFC-WF-34	Forage composition in Kaibab squirrel habitat will include at least 20% grasses and forbs, 20% mast-producing species, and 30% ponderosa pine CBW at all key areas, where consistent with site potential.

TABLE 2.4. WILDLIFE AND FISH (WF)	
Decision #	**Decision Text**
B. LAND USE ALLOCATIONS	
LA-WF-03	18,449 acres of ponderosa pine forest in the Mt. Trumbull and Mt. Logan areas will be allocated as the Trumbull-Logan WHA for Kaibab squirrels (see Map 2.5). A small portion of this WHA falls within Arizona Strip Field Office (FO) as well.
C. MANAGEMENT ACTIONS	
MA-WF-27	Self-sustaining populations of Kaibab squirrels will be enhanced or maintained within the Trumbull-Logan WHA (see Map 2.5). Initial or supplemental transplants on BLM land will be authorized on a case-by-case basis.
MA-WF-28	On BLM-administered lands, Kaibab squirrels within the Trumbull-Logan WHA will be managed for healthy, self-sustaining populations in accordance with population goals and objectives established in the AGFD Strategic Plan for the species.
DESERT COTTONTAIL RABBIT	
A. DESIRED FUTURE CONDITIONS	
DFC-WF-35	Desert cottontail habitat will provide the necessary forage, water, and shelter components for healthy, self-sustaining populations within the range of natural variability.
DFC-WF-36	Desert cottontail rabbits will be present in sufficient quantity to provide an adequate prey base for raptors, carnivores, and other predatory species, as well as ample recreational opportunities for hunting and wildlife viewing.
B. MANAGEMENT ACTIONS	
MA-WF-29	On BLM-administered lands, cottontails in the Monument will be managed for healthy, self-sustaining populations in accordance with population goals and objectives established in the AGFD Strategic Plan for these species.
MA-WF-30	Cottontail rabbit habitat will be maintained, monitored, and improved to ensure a healthy and diverse predator component throughout the habitat area.
MIGRATORY BIRDS	
A. DESIRED FUTURE CONDITIONS	
DFC-WF-37	Migratory bird habitats will provide the necessary forage, water, and shelter components for healthy, self-sustaining populations within the range of natural variability.
DFC-WF-38	Migratory birds that nest in the Monument will have resources of sufficient quantity and quality to provide for nesting sites and to fledge young successfully.
DFC-WF-39	Wintering populations of waterfowl will be sufficiently abundant to provide for recreational wildlife viewing and hunting opportunities.
B. MANAGEMENT ACTIONS	
MA-WF-31	Projects to enhance waterfowl populations through habitat manipulations will be developed and implemented. Opportunities to view waterfowl will be promoted. On NPS-administered lands, existing waterfowl habitat will be maintained within NPS policies to ensure

TABLE 2.4. WILDLIFE AND FISH (WF)	
Decision #	**Decision Text**
	sustainability of the natural range of habitats within the ecosystem.
MA-WF-32	Adverse effects to breeding bird populations caused by disturbances from authorized activities will be minimized through stipulations and other mitigation.
MA-WF-33	Migratory birds will be managed through implementation of Executive Order 13186. Additional restrictions on surface disturbing activities will be developed on a case-by-case basis through NEPA analysis.
GAME BIRDS	
A. DESIRED FUTURE CONDITIONS	
DFC-WF-40	Merriam's turkey habitat will provide the necessary forage, water, and shelter components for healthy, self-sustaining populations within the range of natural variability.
DFC-WF-41	Vertical structure and understory density will be sufficient in the ponderosa pine ecological zone to provide nesting and roosting habitat for Merriam's turkey.
DFC-WF-42	On BLM-administered lands, forage composition in turkey habitat will include at least 20% grasses and forbs, and 20% mast-producing species at all key areas CBW, where consistent with site potential.
DFC-WF-43	Water sources within game bird habitats will be safely accessible by all wildlife.
DFC-WF-44	On BLM-administered lands, water sources within Merriam's turkey habitat will be spaced no more than 3 miles apart.
B. MANAGEMENT ACTIONS	
MA-WF-34	Priority game bird species will include Merriam's turkey, Gambel's quail, white-winged dove, mourning dove, chukar partridge, and band-tailed pigeons.
MA-WF-35	Self-sustaining populations of Merriam's turkey will be established within all habitat areas, including Mt. Trumbull, Mt. Logan, and Black Rock. New habitat areas can be added where appropriate. Initial or supplemental transplants will be authorized on a case-by-case basis and, on NPS-administered lands, will meet NPS Management Policies regarding the restoration of native species.
MA-WF-36	On BLM-administered lands, Merriam's Turkey habitat will be managed for at least 20% grasses and forbs and at least 20% mast-producing species CBW, where consistent with site potential. On BLM and NPS-administered lands, old growth in the ponderosa pine ecological zone will be protected to ensure roost sites for Merriam's Turkey.
MA-WF-37	No initial or supplemental transplants of chukar partridge will occur in the Monument.
MA-WF-38	On BLM-administered lands, game bird populations in the Monument will be managed for healthy, self-sustaining populations in accordance with population goals and objectives established in the AGFD Strategic Plan for these species.
MA-WF-39	An HMP for game birds on BLM-administered lands will be developed and implemented in Game Management Units 13A and 13B consistent with the AGFD Strategic Plan. Site-specific management actions will be included. The plan will be amended or revised as

TABLE 2.4. WILDLIFE AND FISH (WF)	
Decision #	**Decision Text**
	necessary. Implementation accomplishments will be monitored annually. The plan will be amended to include NPS-administered lands with actions taken in compliance with NPS Management Policies regarding restoration of native species.
CARNIVORES AND FURBEARERS	
A. DESIRED FUTURE CONDITIONS	
DFC-WF-45	Carnivore habitat will provide the necessary forage, water, and shelter components for healthy, self-sustaining populations within the range of natural variability.
DFC-WF-46	Opportunities for hunting, trapping, and viewing carnivores and furbearers such as coyote, bobcat, mountain lion, kit fox, gray fox, and others will continue to be provided.
B. MANAGEMENT ACTIONS	
MA-WF-40	Priority carnivore species will include mountain lion, kit fox, gray fox, and long-tailed weasel.
MA-WF-41	The historical range and distribution of furbearers and predatory mammals will be maintained. Maximum recreational, economic, and aesthetic uses corresponding with existing populations will be allowed.
MA-WF-42	On BLM-administered lands, carnivores will be managed for healthy, self-sustaining populations in accordance with population goals and objectives established in the AGFD Strategic Plan for these species.



Map 2.5
Wildlife Habitat Areas (WHA)

Grand Wash Cliffs WHA
Pakoon WHA
Pakoon - Grand Wash Cliffs WHA
Pakoon - Virgin Mountains WHA
Trumbull - Logan WHA
Virgin Mountains WHA

Wilderness
Monument Boundary
State Boundary

Transportation
Interstate
Highway
Major Route
Secondary Route
4WD Route

Note: Decisions in this document only apply to Bureau of Land Management (BLM) and National Park Service (NPS) lands in the Planning Area.

No warranty is made by BLM or NPS for the use of this map for purposes not intended by either agency, or to the accuracy, reliability or completeness of the information shown. Spatial information may not meet National Map Accuracy Standards. This information may be updated without notification.

Note: Refer to CD of the Approved Plan for a digital version of this map.

Prepared by
Arizona Strip GIS Team
December 2007

N W E S

0 5 10 Miles

Map 2.5 Wildlife Habitat Areas (WHA)

TABLE 2.5. SPECIAL STATUS SPECIES (TE)	
Decision #	**Decision Text**
ALL SPECIAL STATUS SPECIES	
A. DESIRED FUTURE CONDITIONS	
DFC-TE-01	All federally listed threatened or endangered species found in the Monument will be recovered.
DFC-TE-02	Management of discretionary activities in the Monument will not contribute to the need to list proposed, candidate, state, BLM, or NPS sensitive species, and will include conservation measures and stipulations benefiting special status species.
DFC-TE-03	The Monument will provide a block of remote, contiguous habitat that will serve as refugia for populations of special status species.
DFC-TE-04	There will be no net loss in the quality or quantity of special status species habitat throughout the Monument.
DFC-TE-05	The public will be well informed about of special status species in the Monument and the need for conservation.
B. MANAGEMENT ACTIONS	
MA-TE-01	Priority for the application of management actions will be for: • Species federally listed under the ESA as endangered or threatened, • Species proposed for Federal listing, • Species that are candidates for Federal listing, • Species included in the Wildlife Species of Concern in Arizona document, • Species for which a conservation strategy/agreement has been developed, and • Species included on the BLM or NPS Sensitive Species Lists.
MA-TE-02	On BLM-administered lands, specific actions and direction for managing special status species will be guided by the use of interdisciplinary wildlife HMPs produced cooperatively with the AGFD, USFWS, and other interested participants. Implementation accomplishments will be monitored and reviewed annually and documented in HMP files. HMPs will be amended or revised as necessary to incorporate new information and adjust management.
	On NPS-administered lands, management of special status species, as needed, will be implemented through specific action plans tiered to the Lake Mead Resources Stewardship Plan or General Management Plan. Planning and implementation will be conducted cooperatively with AGFD, BLM, USFWS, and other stakeholders.
MA-TE-03	Management of sensitive and endangered species will be consistent with biological opinions, recovery plans, conservation strategies, BLM and NPS policies, and the ESA, and will be consistent with achieving all DFCs, to the extent possible
MA-TE-04	Reintroductions, transplants, and supplemental stockings (augmentations) of special status species populations will be carried out in collaboration with the AGFD and or the USFWS for the following purposes: • To maintain current populations, distributions, and genetic diversity;

TABLE 2.5. SPECIAL STATUS SPECIES (TE)	
Decision #	**Decision Text**
	• To conserve or recover threatened or endangered species; and/or • To restore or enhance native populations, diversity, or distribution of special status species. Species that may be reintroduced, transplanted, or augmented may include, but will not be limited to, desert tortoise, chuckwalla, banded Gila monster, northern leopard frogs, relict leopard frogs, lowland leopard frogs, endemic springsnails, woundfin minnow, Virgin River chub, Virgin spinedace, desert sucker, flannelmouth sucker, California condor, Yuma clapper rail, yellow-billed cuckoo, SW flycatcher, ferruginous hawk, northern goshawk, western burrowing owl, white-faced ibis. These actions will be based on the best available scientific information. Introductions of non-endemic, special status animal species native to the region can be authorized on BLM-administered lands only, on a case-by-case basis in coordination with the AGFD, USFWS, counties, and adjacent landowners.
MA-TE-05	The BLM and NPS will continue to cooperate with the USFWS to ensure specific actions comply with the ESA. The BLM and NPS will continue to undertake active management programs to inventory, monitor, restore, and maintain listed species habitats, control detrimental non-native species, control detrimental public access, and re-establish extirpated populations as necessary to maintain the species and their habitats.
MA-TE-06	Where actions authorized or permitted by the BLM and/or NPS may adversely affect a listed or proposed species, or adversely modify designated or proposed critical habitat, the BLM and NPS will work cooperatively with the USFWS to resolve or mitigate these impacts through implementation of species-specific conservation measures. (See Appendix G.)
MA-TE-07	Where actions that occur within the Monument, but are not specifically authorized or permitted by the BLM or NPS, may result in death or injury of a listed or proposed species or adversely modify designated or proposed critical habitat, the BLM and NPS will work cooperatively with the USFWS, as well as other county, state, and Federal agencies, non-governmental organizations, and members of the public to reduce or eliminate the possibility of adverse effects in a timely and appropriate manner. The BLM and NPS can use planning, education programs, restrictions on season of use or number of users, area closures, law enforcement contact, or other vigorous compliance efforts to discourage activities that cause injury or mortality or degrade habitat of listed or proposed species.
Vegetation Management and Fire and Fuels	
MA-TE-08	Conservation measures described in Appendix G will be implemented for all vegetation management actions including restoration and rehabilitation, fuels treatments, prescribed burning, and other related actions in special status species habitats.
MA-TE-09	Collection of dead and down wood in special status species habitats will be allowed for personal camp use only.
MA-TE-10	Conservation measures described in Appendix G will be implemented for all fire suppression, restoration and rehabilitation, fuels treatments, prescribed burning, and other fire related actions in special status species habitats.
Grazing Management	
MA-TE-11	Season of use or other modifications to livestock grazing systems can be implemented to protect special status species. (Specific implementation actions are discussed below for the species they benefit and in the Livestock Grazing Management section.)

TABLE 2.5. SPECIAL STATUS SPECIES (TE)	
Decision #	**Decision Text**
	Recreation Management
MA-TE-12	No new developed campgrounds will be authorized or constructed in listed or proposed special status species habitat.
MA-TE-13	The BLM and NPS can further limit or restrict any recreation activity or use that degrades any special status species habitat or may cause disturbance, injury, or mortality to the species.
	Surface Disturbing Actions
MA-TE-14	Prior to surface disturbing activity, a special status species review will be conducted by a qualified specialist.
MA-TE-15	Special status species habitat surveys will be required whenever surface disturbances occur within an area of known or suspected occupancy by special status species.
	SPECIAL STATUS PLANTS
A. DESIRED FUTURE CONDITIONS	
DFC-TE-06	Populations of plants that are listed or proposed for Federal listing will be recovered.
DFC-TE-07	Populations of special status plant species will increase to stable, self-sustaining levels.
DFC-TE-08	There will be no net loss in the quality or quantity of special status species habitat throughout the Monument.
C. MANAGEMENT ACTIONS	
MA-TE-16	• Participation in conservation efforts for special status plant species will continue. • Special status plant habitat on state and Federal lands in the Monument will be preserved, protected, and managed. • Monitoring efforts for special status plant populations within the Monument will continue. • A program of public conservation education and planning directed towards preservation of special status plant habitat will be carried out.
MA-TE-17	The BLM and NPS will develop and implement HMPs for special status species in cooperation with the AGFD and the USFWS. These HMPs will serve as the management plan for vegetation habitat management areas.
	Recreation Management
MA-TE-18	• Recreational activities that degrade special status plant habitats will be modified or relocated to minimize or eliminate adverse effects. • In listed plant habitats, hiking will be allowed. Biking will be allowed only on designated routes. Education programs and law enforcement contact will be used to minimize recreational activities that cause injury or mortality or degrade habitat of these species.
	Travel Management
MA-TE-19	• Vehicle use in special status plant habitats will be limited to designated routes with reasonable use of the shoulder. • In special status plant habitats, use of OHVs off of designated routes will not be authorized except in emergencies. • In special status plant habitats, vehicles will not be allowed to pull off the road to camp.

TABLE 2.5. SPECIAL STATUS SPECIES (TE)	
Decision #	**Decision Text**
	Grazing Management
MA-TE-20	Disturbance, injury, or mortality of special status plants resulting from grazing by livestock will be minimized or eliminated. Where grazing by livestock is leading to adverse effects, conservation measures will be implemented to reduce or mitigate loss of the plant species. Measures can include fencing, seasonal restrictions, or relocation of livestock developments. The need for implementation of conservation measures will be assessed on a case-by-case basis, typically at the time of the rangeland health assessment.
	Vegetation Management
MA-TE-21	• Restoration and vegetation treatments will not be authorized in special status plant habitat, unless doing so will provide benefits to the species. • The impact of herbicide/pesticide use on special status plant species will be determined. The use of harmful herbicides in areas where special status plants can be affected will be limited or eliminated (Beaverdam breadroot, black rock daisy, three hearts, Trumbull beardtongue). • Collection of fuel wood will not be authorized in special status plant habitats. • Conservation measures will be implemented for all vegetation management actions in special status plant habitats as described in Appendix G.
	Surface Disturbing Activities
MA-TE-22	• Impacts to special status plants and their habitats from surface disturbing activities will be reduced or eliminated. • Proposed actions will be evaluated to ensure that trampling or crushing of special status plants will be minimized or eliminated. The BLM and NPS will continue to coordinate with USFWS to delineate buffer areas around special status plant populations. Use restrictions can be developed to minimize or eliminate trampling and/or crushing of special status plants within buffer areas. • Conservation measures will be implemented for special status plants for all surface disturbing activities as described in Appendix G.
	DESERT TORTOISE
A. DESIRED FUTURE CONDITIONS	
DFC-TE-09	The Mojave population of desert tortoise will be recovered and delisted.
DFC-TE-10	There will be no net loss in the quality or quantity of desert tortoise habitat within WHAs.
DFC-TE-11	Desert tortoise populations within the DWMAs (see Map 2.6 for desert tortoise habitat) will be healthy and self-sustaining. Populations will be stable or increasing. Population declines will be halted.
DFC-TE-12	Desert tortoise populations outside of the WHA will be healthy and stable (see Map 2.5 for WHA area). Impacts to the population of the WHA will be minimized to the extent possible through mitigation (See Map 2.6 for surveyed desert tortoise habitat including the USFWS designated critical habitat area).
DFC-TE-13	Desert tortoise habitat will provide sufficient forage and cover attributes to support thriving populations of the species.

TABLE 2.5. SPECIAL STATUS SPECIES (TE)	
Decision #	**Decision Text**
DFC-TE-14	Habitat connectivity will be maintained, providing sufficiently frequent contact between tortoises to maintain genetic diversity.
B. SPECIAL DESIGNATION	
SD-TE-01	The Pakoon Area of Critical Environmental Concern (ACEC) for protection of the threatened desert tortoise and Mojave Desert Ecological Zone will be revoked because Monument status provides additional protection of resources beyond that afforded by ACEC designation.
C. LAND USE ALLOCATION	
LA-TE-01	The Pakoon WHA (see Map 2.5) will be allocated for protection of desert tortoise at 171,709 acres including the area formerly designated as the Pakoon ACEC, plus all critical desert tortoise habitat in the Monument (See Map 2.6). Management objectives will give priority to desert tortoise and implementation of recovery plan actions. Activities administered by the Monument staff on Lake Mead National Recreation Area (NRA) and on public lands in Nevada will be managed in accordance with WHA prescriptions. Desert tortoise needs will be considered the highest priority in resolving resource conflicts in the Pakoon WHA (see Maps 2.5 and 2.6).
D. MANAGEMENT ACTIONS	
MA-TE-23	• Active participation in the recovery of desert tortoise will continue. • Assistance will be provided in the implementation of recovery tasks identified in the recovery plan. • Adjacent landowners will be encouraged in the development of a habitat conservation plan (HCP) to provide for the conservation of desert tortoise while managing community and regional growth. Assistance will be provided in the development of the HCP. The HCP will be integrated with the Approved Plan. • Highest quality desert tortoise habitat will be identified based on habitat features, vegetation, and tortoise densities. • Lowest quality desert tortoise habitat will be identified based on habitat features, vegetation, and tortoise densities. • Wilderness management plans (WHPs) for the Paiute and Grand Wash Cliff wilderness areas will be amended or revised to incorporate applicable recovery needs for desert tortoise. • The BLM and NPS will continue to monitor and patrol desert tortoise habitat, and to investigate illegal activities on public lands in the area. Law enforcement presence will be at a level adequate to promote public compliance with use regulations.
MA-TE-24	The BLM can authorize translocations of desert tortoises onto public lands only when all of the following conditions are met 1) prior authorization from USFWS and AGFD is obtained, 2) the desert tortoise population in the area to which a tortoise(s) be moved is depressed, 3) testing of animals to be translocated is conducted to ensure that spread of upper respiratory tract disease or other diseases is not facilitated as a result of translocations, 4) handling of desert tortoises is in compliance with conservation measures, and 5) protocols are followed to ensure that translocated animals have the greatest chance for survival and do not disrupt the behavior of resident animals.
Fire Management	
MA-TE-25	• Appropriate action will be taken to suppress all wildfires in desert tortoise habitat, based on preplanned analysis and consistent with land management objectives, including threats to life and property. All wildfires in desert tortoise habitat will be suppressed with minimum surface disturbance, in accordance with the guidelines in Duck et al. (1995).

TABLE 2.5. SPECIAL STATUS SPECIES (TE)	
Decision #	**Decision Text**
	• Protection of highest quality desert tortoise areas from wildfire will be the highest priority. • Suppression forces will be pre-positioned in critical areas during periods of high fire dangers. • Assistance with design, funding, and implementation of efforts to construct minimal impact firebreaks in desert tortoise habitat will continue. • Conservation measures for desert tortoise will be implemented for all fire suppression and management actions in desert tortoise habitat as described in Appendix G (fire suppression, fuels treatment, prescribed burning). Fire management actions will include fire use, prescribed fire, restoration, and rehabilitation.
Vegetation Management	
MA-TE-26	Invasive exotic annual grasses in desert tortoise habitat will be reduced and/or removed. • DPC objectives will be developed during rangeland health assessments that consider desert tortoise forage, cover, and habitat needs. DPC objectives and recommended actions for achieving these objectives will be incorporated into AMPs. • Areas of highest quality, unburned desert tortoise habitat will receive highest priority for restoration. • Vegetative conditions in desert tortoise habitat will be maintained or improved in accordance with DPC objectives. • Desert tortoise habitat will be closed to live vegetation harvest, except salvage in areas where surface disturbance has been authorized. • Collection of dead and down wood will be allowed for personal camp use only. • Conservation measures for desert tortoise will be implemented for all vegetation management actions in desert tortoise habitat as described in Appendix G. Vegetation management actions will include vegetation treatments, fuels reduction, restoration, and rehabilitation.
MA-TE-27	No mechanical treatment or conversion will be allowed unless the project benefits or improves tortoise management and condition of habitat.
Grazing Management	
MA-TE-28	Grazing systems will be established for all allotments with desert tortoise habitat with a full range of management options including no grazing (unavailable), inactive season grazing, and rotational grazing prescriptions. Grazing will be authorized based on maintaining or improving vegetation conditions in desert tortoise habitat using ecological site inventory data as the baseline condition. Adaptive management will be used to determine if and when changes in grazing systems, season of use, and other parameters will be implemented to meet DFCs. Exclusion fences or other methods will be used to ensure areas unavailable to grazing will not be grazed.
MA-TE-29	Grazing utilization levels will be set at 45% of current year's growth on allotments in desert tortoise habitat.
Surface Disturbing Activities	
MA-TE-30	• Effects to desert tortoise from authorized projects will be minimized or eliminated. "Project" refer to any surface-disturbing activities proposed that may cause disturbance of desert tortoise habitat and/or death or injury of a desert tortoise, with the exception of grazing by livestock and activities associated with fire suppression.

TABLE 2.5. SPECIAL STATUS SPECIES (TE)	
Decision #	**Decision Text**
	• To the extent possible, project activities will be scheduled when tortoises are inactive (October 15 through March 15). The following project activities will only be authorized between October 15 and March 15: organized, non-speed vehicular events; construction and non-emergency maintenance activities in ROWs; and non-emergency maintenance of existing roads. • To the extent possible, project features will be located in previously-disturbed areas or outside of desert tortoise habitat.
MA-TE-31	Reclamation will be required for activities that result in loss or degradation of tortoise habitat. Habitat will be restored or reclaimed to as close a pre-disturbance condition as practicable. Mitigation measures may be included in decision documents to offset the loss of quality or quantity of desert tortoise habitat.
MA-TE-32	Compensation may be required to mitigate residual impacts from authorized actions.
MA-TE-33	The BLM will not authorize any military maneuvers in desert tortoise habitat.
MA-TE-34	Authorized actions that may result in adverse effects to desert tortoises will require implementation of project stipulations including personnel education programs, pre-construction clearances, defined construction areas, operational restrictions, and procedures for moving tortoises out of harm's way. (See Appendix G for a list of stipulations.)
MA-TE-35	Proposed actions will be evaluated to ensure they do not contribute to the proliferation of natural predators within desert tortoise habitat. New water developments can be authorized if they are designed to minimize or eliminate the potential for tortoise drowning and predators are not attracted.
Recreation Management	
MA-TE-36	• No competitive speed vehicle events will be authorized in desert tortoise habitat. • The BLM and/or NPS will apply the following stipulations to any non-speed motor vehicular events in desert tortoise habitat (or non-speed portions of speed events) requiring permitting: 1. No organized non-speed events will occur from March 15 through October 15. 2. Permits will be required for events with 50 or more participants. 3. Vehicle travel will be limited to designated routes, or before route designation, to existing routes. 4. Vehicles will not exceed the legal speed limit (posted or unposted) of the road in which they are on during the event. 5. No more than 400 motorcycles or all terrain vehicles, or 300 four-wheeled vehicles will be allowed in any one event. • Events will have enough monitors to ensure compliance with regulations. • Vehicle camping will be restricted to disturbed areas along designated routes in desert tortoise habitat. Mountain biking will be allowed on designated routes throughout the area; back packing and horseback riding will also be allowed, providing desert tortoise or their habitats are not adversely impacted. • Activities that can adversely affect the desert tortoise within tortoise habitat will be limited between October 15 and March 15, during their active season. The BLM and NPS may restrict season of use, number of visitors, and/or close an area to recreational activities.

TABLE 2.5. SPECIAL STATUS SPECIES (TE)	
Decision #	**Decision Text**
MA-TE-37	The BLM will identify areas where uncontrolled dogs are causing desert tortoise mortality. If predation of tortoises by dogs is discovered, BLM will encourage Mohave County to enforce ordinances prohibiting uncontrolled dogs in those areas. Dogs are required to be on leash on NPS-administered lands.
Travel Management	
MA-TE-38	Motorized and mechanized travel will be limited to designated roads.
MA-TE-39	Vehicles associated with agency-authorized projects traveling on unpaved roads in desert tortoise habitat will be required to keep speeds at or below 40 mph during the tortoise's active season to protect the species. Speed limits may be less on specific roads through high-density tortoise areas.
MA-TE-40	The BLM and/or NPS will maintain or authorize maintenance of existing roads in desert tortoise habitat, other than emergency maintenance activities from October 15 to March 15 only. Operators of road graders and other maintenance equipment will be required to attend an educational briefing prior to performing the work. Maintenance activities will be limited to previously disturbed areas, unless cleared by a qualified biologist.
Pakoon Wildlife Habitat Area	
Grazing Management	
MA-TE-41	The Tassi Allotment will continue to be unavailable for livestock grazing.
MA-TE-42	Those portions of the Mosby-Nay Allotment within the former Pakoon ACEC will be unavailable for grazing. The remaining portions of the Mosby-Nay allotment will be available for grazing.
MA-TE-43	Those portions of the Pakoon Springs Allotment within the former Pakoon ACEC will be unavailable for grazing. In addition, the area unavailable to grazing will be expanded from the southern allotment boundary north up Pakoon Wash approximately 3 miles, and up Cedar Wash and Cottonwood Wash to approximately Wayne's Well. This will include the Pakoon Springs area.
MA-TE-44	Those portions of the Pakoon Allotment within the former Pakoon ACEC (Grand Gulch Wash area) will be available for livestock grazing.
Burro Management (Pakoon DWMA)	
MA-TE-45	• Wild horses and burros will not be authorized on NPS and BLM-administered lands in the Monument. Burros on NPS-administered lands are managed to prescription set by the 1995 Lake Mead NRA Burro Management Plan. • The herd management level for the Tassi-Gold Butte Herd Management Area will be set to zero on BLM-administered lands in the Monument. Burros will be removed rather than destroyed on site.
Surface Disturbing Activities	
MA-TE-46	Compensation may be required to mitigate residual impacts from authorized actions. The BLM will assess compensation at the Category 1 rate for any proposed projects in the Pakoon WHA (see Maps 2.5 and 2.6)_

TABLE 2.5. SPECIAL STATUS SPECIES (TE)	
Decision #	**Decision Text**
	Travel Management
MA-TE-47	• New paved roads will not be authorized in the Pakoon WHA. Temporary upgrading of existing roads and construction of new unpaved roads in the WHA can be authorized only on BLM-administered lands where positive benefits will result for desert tortoise or their habitat. • The BLM and/or NPS will maintain or authorize maintenance of existing roads in desert tortoise habitat, except that non-emergency maintenance activities can be conducted from October 15 to March 15. Operators of road graders and other maintenance equipment will be required to attend an educational briefing prior to performing the work. Maintenance activities will be limited to previously disturbed areas, unless cleared by a qualified biologist. • The BLM will implement route designation within the Pakoon WHA. Roads targeted for closure will include those that 1) have no purpose, 2) are duplicative or redundant, or 3) are causing high levels of mortality of tortoises. Vehicles will be restricted to existing roads and trails prior to route designation. After designation, vehicles will be restricted to designated routes only. Implementation of the closure/designation plan will include the following actions 1) sign entry portals/major intersections with signs that read "Limited to Designated Roads", 2) sign all designated routes as open, 3) and sign along designated routes indicating that driving off of designated routes is not permitted.
	AMPHIBIANS AND AQUATIC INVERTEBRATES
A. DESIRED FUTURE CONDITIONS	
DFC-TE-15	Essential habitats, important migration routes, required flows, and water quality will be protected and maintained in lentic and lotic systems in the Monument.
DFC-TE-16	No net loss will occur in the quality and quantity of suitable habitat for endemic amphibians and aquatic invertebrate species within the Monument.
DFC-TE-17	All biologically suitable perennial waters on public lands in the Monument will be occupied by thriving, self-sustaining populations of native, endemic amphibians and aquatic invertebrate species, as appropriate.
DFC-TE-18	New introduced (or re-introduced) populations of relict leopard frog will increase to the point of being viable and self-sustaining.
DFC-TE-19	Relict leopard frogs will be recovered and managed in accordance with the Conservation Agreement to maintain viable populations throughout their range.
B. MANAGEMENT ACTIONS	
MA-TE-48	• Introductions and/or augmentations of relict leopard frogs can be authorized at suitable habitat locations, such as Pakoon Springs and Tassi Springs. Introductions and augmentations will be coordinated closely with the Relict Leopard Frog Conservation Team, AGFD, USFWS, counties, tribes, and adjacent landowners. Introductions can be made in areas where doing so is not detrimental to viability of populations of other native species.

TABLE 2.5. SPECIAL STATUS SPECIES (TE)	
Decision #	**Decision Text**
	• The final Conservation Agreement and Rangewide Conservation Assessment and Strategy for relict leopard frogs will be implemented.
MA-TE-49	Actions that degrade riparian habitat or reduce the potential of the area to support riparian vegetation will be modified, restricted, or prohibited.
SPECIAL STATUS RAPTORS (ALL SPECIAL STATUS RAPTORS)	
A. DESIRED FUTURE CONDITIONS	
DFC-TE-20	Special status raptor populations will be healthy and self-sustaining throughout their range.
DFC-TE-21	Habitat areas for special status raptors will provide sufficient forage and cover attributes to support thriving populations of the species.
DFC-TE-22	No net loss will occur in the quality and quantity of suitable habitat for special status raptors within the Monument.
DFC-TE-23	Potential roosting and nesting sites (for special status raptors) will be abundant.
DFC-TE-24	Riparian areas will be in proper functioning condition and be of sufficient quantity and quality to provide adequate foraging areas for Bald eagles, peregrine falcon, common black hawk, and other special status raptors.
DFC-TE-25	Rodent populations, as a prey base (for special status raptors), within the Monument will be abundant.
DFC-TE-26	Bald eagles and Mexican spotted owls will be recovered and delisted.
DFC-TE-27	The experimental non-essential population of California condor will be at or above 150 individuals, viable, and stable to increasing in number.
DFC-TE-28	Peregrine falcon, ferruginous hawks, common black hawks, northern goshawks, and burrowing owls will be sufficiently abundant so that there will be no need to list these species.
B. MANAGEMENT ACTIONS	
MA-TE-50	• Priority special status raptors will include bald eagles, California condors, Mexican spotted owls, peregrine falcon, burrowing owls, ferruginous hawks, northern goshawks, and common black hawks. • Special status raptor habitats on state and Federal lands in the Monument will be preserved, protected, and managed for population maintenance and expansion. • A policy of "no net loss" of special status raptor habitat will be maintained. • Occupied special status raptor habitats will be protected as a first priority. • The BLM, NPS, and AGFD will determine population numbers, distribution, and trends of special status raptors. • The effects of pesticide and herbicide use on special status raptors in the Monument will be assessed.
Vegetation Management	
MA-TE-51	• Existing and potential habitat for special status raptor population continuance and expansion will be identified, protected, and improved. Land use practices and developments that alter the character of the habitat that make it suitable for special status raptors will be limited, modified, or relocated.

TABLE 2.5. SPECIAL STATUS SPECIES (TE)	
Decision #	**Decision Text**
	• Suitable and potential habitats will be maintained and upgraded to insure they remain attractive to special status raptors. • The use of harmful pesticides or herbicides will be reduced or eliminated within one mile of special status raptor use areas. If used, application will occur in a manner that avoids drift, according to directions (i.e. not broad applications). • Suitable habitats for special status raptors in the Monument will be maintained and increased. Suitable structural characteristics may be achieved through restoring, maintaining, enhancing, and creating habitat. • Suitable habitats will be managed so their suitable characteristics are not eliminated or degraded. Habitats will be managed for large, contiguous blocks, rather than for small fragmented areas. Connectivity to currently isolated suitable sites will be enhanced. Use of buffer zones between suitable and unsuitable areas will be encouraged.
Surface Disturbing Activities	
MA-TE-52	Actions that will adversely affect special status raptors during their nesting period may be subject to stipulations, mitigation, or may not be approved.
Recreation Management	
MA-TE-53	• Impacts to special status raptors and/or their habitat from recreational activities will be reduced or eliminated. • The presence and intensity of allowable recreational activities within special status raptor habitats will be assessed. Seasonal closures of specifically designated recreation activities can be considered, where appropriate.
SPECIAL STATUS RAPTORS (BALD EAGLE)	
Bald Eagle Habitat Management	
MA-TE-54	• Assistance will be provided in implementation of recovery tasks identified in the recovery plan. • Areas for construction of roost and perch poles in the Monument will be identified to replace natural roosts and perches lost by development or decay. • Patterns of movement for wintering eagles, including fledglings, immatures, and adults, will be determined. Food habits for bald eagles within the Monument will be determined.
Surface Disturbing Activities	
MA-TE-55	• The BLM and NPS can limit, modify, or relocate authorized and/or permitted activities within 0.5 miles of active bald eagle wintering roosts. • Projects and activities causing disturbance to roosting bald eagles should be avoided from October 15 to April 15. • The BLM and NPS will implement conservation measures for protection of bald eagles as defined in Appendix G.

TABLE 2.5. SPECIAL STATUS SPECIES (TE)	
Decision #	**Decision Text**
SPECIAL STATUS RAPTORS (MEXICAN SPOTTED OWL)	
Mexican Spotted Owl Habitat Management	
MA-TE-56	Active participation in the recovery of the Mexican spotted owl will continue. Assistance will be provided in implementation of recovery tasks identified in the recovery plan.
Vegetation Management	
MA-TE-57	Canyon and forest habitats with the potential to support Mexican spotted owl will be managed for maintenance or enhancement of the habitat attributes that make them suitable.
Surface Disturbing Activities	
MA-TE-58	• Land use practices and developments which alter the character of the habitat that make it suitable for Mexican spotted owls will be limited, modified, or relocated • The BLM and NPS will implement conservation measures for protection of Mexican spotted owl as defined in Appendix G.
SPECIAL STATUS RAPTORS (CALIFORNIA CONDOR)	
California Condor Habitat Management	
MA-TE-59	• The BLM and NPS will continue to actively participate in the recovery of the California condor. • The BLM and NPS will assist in implementation of recovery tasks identified in the recovery plan. • Restoration of California condor into historic habitats in northern Arizona will be continued in cooperation with the Peregrine Fund, AGFD, USFWS, California condor Recovery Program, and others. Supplemental releases will be authorized. • The population objective for California condor will be to maintain a self-sustaining population with a positive growth rate of at least 150 individuals with at least 15 breeding pairs. Population objectives will be modified or changed in accordance with the recovery plan for the species. • The BLM and NPS will identify and, where possible, reduce or eliminate sources of lead contamination for condors within the Monument. The BLM and NPS will encourage voluntary use of non-lead ammunition in the Monument.
Vegetation Management	
MA-TE-60	• The protective measures for California condors that are contained in the July 2004 "Recommended Protection Measures for Pesticide Applications in the Southwest Region of the USFWS" when conducting chemical treatments will be implemented. • California condor foraging habitat will be maintained.
Surface Disturbing Activities	
MA-TE-61	The BLM and NPS will implement conservation measures for protection of California condors as defined in Appendix G.

TABLE 2.5. SPECIAL STATUS SPECIES (TE)	
Decision #	**Decision Text**
MA-TE-62	Within the 10(j) area, the BLM will not restrict authorized and/or permitted activities solely for the benefit of California condors. Persons engaged in authorized or permitted actions that encounter a condor will be requested not to haze the birds, but to notify the BLM or the Peregrine Fund. Administrative or other actions implemented by the BLM can be subject to additional stipulations and conservation measures as described in Appendix G.
SPECIAL STATUS RAPTORS (PEREGRINE FALCON)	
Peregrine Falcon Habitat Management	
MA-TE-63	• Active participation will continue in the post-delisting recovery monitoring of peregrine falcons in the Monument. • Actions that will adversely affect nesting peregrines between March 1 and August 1 can be subject to stipulations, mitigation, or may not be approved
Surface Disturbing Activities	
MA-TE-64	• Authorized actions, including construction projects, to areas more than 0.5 miles of known peregrine falcon during the active nesting season between April 15 and August 15 will be limited, modified, or relocated. • The BLM and NPS will implement conservation measures for protection of peregrine falcon as defined in Appendix G.
SPECIAL STATUS RAPTORS (BURROWING OWL)	
MA-TE-65	No species-specific augmentations of burrowing owl will be planned or implemented.
RIPARIAN DEPENDENT SPECIAL STATUS BIRDS (ALL RIPARIAN-DEPENDENT SPECIAL STATUS BIRD SPECIES)	
A. DESIRED FUTURE CONDITIONS	
DFC-TE-29	No net loss will occur in the quality and quantity of suitable habitat for riparian-dependent special status bird species within the Monument.
DFC-TE-30	Occupied habitats will be protected as a first priority.
DFC-TE-31	Riparian areas will be in proper functioning condition and be of sufficient quantity and quality to provide adequate foraging areas for SW flycatcher, Yuma clapper rail, yellow-billed cuckoo, and other special status birds.
DFC-TE-32	SW flycatcher and Yuma clapper rail will be recovered and delisted.
DFC-TE-33	Riparian areas that can physically support SW flycatcher habitats due to floodplain width and gradient will attain the vegetation structure, plant species diversity, density, and canopy cover to be suitable habitat.
DFC-TE-34	Riparian vegetation will be sufficiently dense and structurally complex to minimize or eliminate the effects of flycatcher predators and preclude brown-headed cowbirds from finding SW flycatcher nests.
DFC-TE-35	Cottonwood gallery forests will be abundant and provide habitat for yellow-billed cuckoos.
DFC-TE-36	Potential roosting and nesting sites for riparian dependent special status birds will be abundant.

TABLE 2.5. SPECIAL STATUS SPECIES (TE)	
Decision #	**Decision Text**
B. MANAGEMENT ACTIONS	
	Riparian-Dependent Special Status Bird Species and Habitat Management
MA-TE-66	• Protection from threats will be provided and sufficient habitat to assure maintenance of populations and/or habitats over time will be created/secured. • Water diversions and groundwater withdrawals will be managed to maintain streamside vegetation. • Impacts of pesticide use on riparian-dependent special status bird species' reproduction adjacent to riparian areas will be determined. • The BLM, NPS, and AGFD will determine population numbers, distribution, and trends of riparian-dependent special status bird species. • The use of harmful pesticides adjacent to riparian areas will be limited or eliminated. If used, application will occur in a manner that avoids drift, according to directions (i.e. not broad applications).
	Vegetation Management
MA-TE-67	• Riparian areas will be managed to achieve and/or maintained in proper functioning condition in accordance with prescriptions described in the vegetation management section of this document (see Vegetation and Fire and Fuels Management decisions). • Suitable nesting riparian habitats for riparian-dependent special status bird species will be maintained or increased. Suitable structural characteristics may be achieved through restoring, maintaining, enhancing, and creating habitat. Management will aim for large, contiguous blocks of habitat rather than for small fragmented areas. Connectivity to currently isolated suitable sites will be enhanced. The use of buffer zones between riparian habitats and adjacent upland areas will be encouraged. Establishment of areas of slow/back waters will be promoted. • Regeneration of native vegetation in restoring riparian habitats will be promoted. Natural reaches of riparian habitat will be restored by restoring intervening degraded segments. • Occupied, suitable, and potential breeding habitat will be increased and improved. • Restoration of native riparian vegetation will continue in sites that have potential to support future breeding habitat for riparian-dependent special status bird species. • Support will continue for applications for instream flow rights with the AZ Department of Water Resources in rivers supporting riparian-dependent species. • Native riparian vegetation in floodplains or channels will be retained. • Protective measures for riparian-dependent special status bird species that are contained in the July 2004 "Recommended Protection Measures for Pesticide Applications in The Southwest Region of the USFWS" will be implemented when conducting chemical treatments. • The BLM and NPS will implement conservation measures for protection of riparian-dependent special status bird species as defined in Appendix G.

TABLE 2.5. SPECIAL STATUS SPECIES (TE)	
Decision #	**Decision Text**
	Grazing Management
MA-TE-68	• Disturbance, injury, mortality, or other forms of take of riparian-dependent special status bird species' resulting from grazing by livestock will be minimized or eliminated. • Grazing systems, strategies, and intensities for riparian recovery and maintenance will be investigated. • Direct effects of livestock grazing on SW flycatchers and their habitat will be investigated.
	Lands and Realty
MA-TE-69	• Specific parcels identified for disposal will be surveyed for special status species and other sensitive resources prior to disposal. The effects of future development on water quality and flows in the Virgin River will be addressed in NEPA documents and ESA consultation prior to disposal. Revenues generated from the sale of FLTFA parcels can be used to acquire adjacent lands with high resource values in accordance with the Arizona Statewide Interagency Implementation Agreement. • Riparian area river channels, floodplains, and terraces will be retained in Federal ownership. All exchanges that can affect water flows (either groundwater or surface water) will be carefully examined to ensure that development on those lands do not affect riparian habitats. • Lands to be acquired will have development potential similar to the disposed lands and will be located in similar proximity to the Virgin River or significant tributaries. • All acquired lands will not have ground or surface water used or reserved for use by non-Federal interests after it is acquired by the government. All existing such uses must be terminated upon acquisition and all rights transferred to the Federal government.
	Travel Management
MA-TE-70	Roads and trails used by OHVs within riparian areas, or areas with the potential to support riparian vegetation will be closed and rehabilitated.
	Surface Disturbing Activities
MA-TE-71	• Where possible and practicable, physical stresses, such as high salinity or reduced stream flows that favor exotic plants, will be reduced or eliminated. Actions that will not allow for natural stream flow regimes including periodic flood events will not be authorized. • Direct impacts that topple or otherwise destroy nests will be reduced.
	Recreation Management
MA-TE-72	Impacts to riparian-dependent special status bird species and/or their habitat from recreational activities will be reduced or eliminated. Recreation that degrades riparian habitat will be prohibited in riparian areas in the Monument. Restrictions can include: • Reducing or eliminating recreational fires. • Confining camping areas. • Locating recreational activity areas away from suitable or potential SW flycatcher habitat.

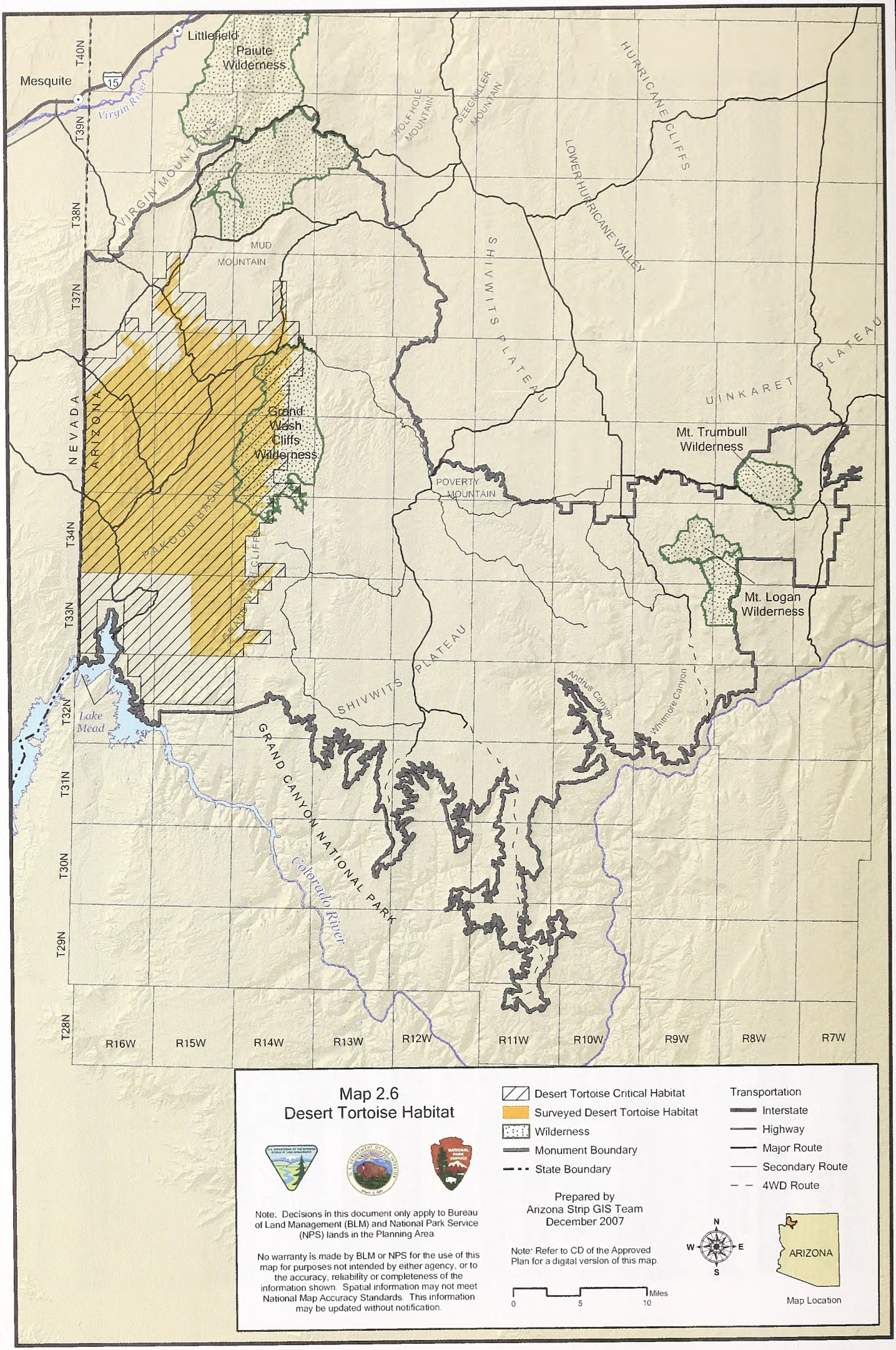
TABLE 2.5. SPECIAL STATUS SPECIES (TE)	
Decision #	**Decision Text**
	• Minimizing trash, debris, and other attractants to scavengers, predators, and crown-headed cowbirds.
RIPARIAN-DEPENDENT SPECIAL STATUS BIRDS (SOUTHWESTERN WILLOW FLYCATCHER)	
Southwestern Willow Flycatcher Habitat Management	
MA-TE-73	• Active participation will continue in the recovery of the SW flycatcher. Assistance will be provided in the implementation of recovery tasks identified in the recovery plan. • The BLM will continue to identify and evaluate areas where concentrations of brown-headed cowbirds occur on public lands in the Monument. • The BLM will evaluate ways to reduce cowbird concentrations. • Cowbird management programs will be developed and implemented where parasitism rates are greater than 20%. Effectiveness of Cowbird trapping at present locations will be evaluated by monitoring nests for parasitism and reproductive success. Reconsideration will be given to assessment of habitat quality or other threats if cowbird control measures do not increase number of breeding SW flycatchers.
Vegetation Management	
MA-TE-74	• Suitable SW flycatcher habitat should be managed so that its suitable characteristics are not eliminated or degraded. Management will be for large, contiguous blocks of habitat rather than for small fragmented areas. Connectivity to currently isolated suitable sites will be enhanced. The use of buffer zones between riparian habitats and adjacent upland areas will be encouraged. Establishment of areas of slow/back waters will be promoted. • Potential habitat will be managed to achieve structural and vegetation characteristics necessary to support increasing numbers of breeding SW flycatcher pairs within 5-20 years. Potential SW flycatcher habitat should be managed to allow natural regeneration (through natural processes) into suitable habitat as rapidly as possible. • The use vs. availability of invasive exotic species, such as tamarisk, by SW flycatcher at occupied nesting sites will be determined. • Native riparian vegetation will be retained in floodplains or channels. • At native dominated sites, tamarisk will be retained in occupied SW flycatcher habitat and, where appropriate, in suitable but unoccupied habitat, unless there is a trend for steady increase of tamarisk. • The BLM and NPS will implement conservation measures for protection of SW flycatcher as defined in Appendix G.
Grazing Management	
MA-TE-75	• Livestock will be excluded from suitable SW flycatcher habitat (whether occupied or unoccupied) during the growing season (bud break to leaf drop). Unsurveyed suitable habitat should be considered occupied. If livestock are excluded using fencing, fencing should be inspected and maintained annually.

TABLE 2.5. SPECIAL STATUS SPECIES (TE)	
Decision #	**Decision Text**
	• In potential habitat, it will be determined if livestock grazing is a major stressor or is otherwise preventing development of the habitat into suitable SW flycatcher habitat. Where this is the case, livestock grazing will be excluded from potential SW flycatcher nesting habitat during the growing season (bud-break to leaf drop).
RIPARIAN-DEPENDENT SPECIAL STATUS BIRDS (YUMA CLAPPER RAIL)	
Yuma Clapper Rail Habitat Management	
MA-TE-76	• Participation in the recovery of the Yuma clapper rail will continue. • Assistance will be provided in implementation of recovery tasks identified in the recovery plan.
Vegetation Management	
MA-TE-77	• Occupied Yuma clapper rail habitats will be protected as a first priority. • Fresh water marsh habitat suitable for Yuma clapper rail nesting will be maintained, enhanced, restored, and/or created. A mosaic of uneven aged marsh vegetation will be maintained. Mechanical manipulation will be avoided during the breeding season (April-June). • Management of potential habitat will be aimed at achieving structural and vegetation characteristics necessary to support increasing numbers of breeding Yuma clapper rails. Potential habitat should be managed to allow natural regeneration (through natural processes) into suitable habitat as rapidly as possible. • Cattail marshes will be retained in occupied clapper rail habitat and, where appropriate, in suitable but unoccupied habitat.
Grazing Management	
MA-TE-78	• Disturbance, injury, mortality, or other forms of take of Yuma clapper rail resulting from grazing by livestock will be minimized or eliminated. • Livestock grazing will be excluded from occupied suitable Yuma clapper rail nesting habitat. • In potential habitat, it will be determined if livestock grazing is a major stressor or is otherwise preventing development of suitable Yuma clapper rail habitat. Where this is the case, livestock grazing will be excluded from potential Yuma clapper rail habitat during the growing season (bud-break to leaf drop).
RIPARIAN-DEPENDENT SPECIAL STATUS BIRDS (YELLOW-BILLED CUCKOO)	
Yellow-Billed Habitat Management	
MA-TE-79	Participation in actions to prevent the need to list yellow-billed cuckoo will continue.
Vegetation Management	
MA-TE-80	• Mature cottonwood-willow gallery forest habitat suitable for yellow-billed cuckoo nesting will be maintained, enhanced, restored, and/or created. Large, contiguous blocks of habitat (>15 ha) will be managed in conjunction with removal of competing exotic species (i.e. salt cedar). The use of buffer zones between riparian habitats and adjacent development will be encouraged. Corridors between "islands" of suitable habitat will be established to allow natural dispersal and recolonization of historic habitats.

TABLE 2.5. SPECIAL STATUS SPECIES (TE)	
Decision #	**Decision Text**
	• Potential habitat will be managed to achieve structural and vegetation characteristics necessary to support increasing numbers of breeding yellow-billed cuckoo. Potential habitat should be managed to allow natural regeneration (through natural processes) into suitable habitat as rapidly as possible. • Retain mature cottonwood-willow gallery forests in yellow-billed cuckoo habitat.
Grazing Management	
MA-TE-81	• Disturbance, injury, or mortality of yellow-billed cuckoo resulting from grazing by livestock will be minimized or eliminated. • Grazing impacts on cottonwood and willow seedlings in riparian systems will be closely monitored and grazing will be reduced or removed when seedlings are being impacted.
Recreation Management	
MA-TE-82	Intense and repeated human disturbance will be avoided at nesting areas from 15 May through 1 September.

TABLE 2.6. WILD BURROS (HB)	
Decision #	**Decision Text**
A. MANAGEMENT ACTIONS	
MA-HB-01	The Herd Management Level will continue to be set at zero on BLM-administered lands. (See Special Status Species decisions).
	Wild horse and burros will not be authorized on NPS-administered lands.

Map 2.6 Desert Tortoise Habitat



Map 2.6
Desert Tortoise Habitat

Desert Tortoise Critical Habitat
Surveyed Desert Tortoise Habitat
Wilderness
Monument Boundary
State Boundary

Transportation
Interstate
Highway
Major Route
Secondary Route
4WD Route

Prepared by
Arizona Strip GIS Team
December 2007

Note: Refer to CD of the Approved Plan for a digital version of this map.

Note. Decisions in this document only apply to Bureau of Land Management (BLM) and National Park Service (NPS) lands in the Planning Area.

No warranty is made by BLM or NPS for the use of this map for purposes not intended by either agency, or to the accuracy, reliability or completeness of the information shown. Spatial information may not meet National Map Accuracy Standards. This information may be updated without notification.

0 5 10 Miles

N W E S

ARIZONA

Map Location

TABLE 2.7. CULTURAL RESOURCES (CL)	
Decision #	**Decision Text**
ARCHAEOLOGICAL AND HISTORIC RESOURCES	
A. DESIRED FUTURE CONDITIONS	
DFC-CL-01	Significant cultural resources will be identified, conserved, protected, stabilized, or restored, and maintained in good or better condition to ensure they are available for appropriate uses by present and future generations.
DFC-CL-02	Imminent threats and potential conflicts from natural or human-caused deterioration or potential conflict with other resource uses will be reduced (Federal Land Policy and Management Act [FLPMA] Sec. 103, National Historic Preservation Act (NHPA), Sections 106 and 110 (a) (2)) by ensuring that all land uses and resource uses initiated or authorized by the BLM comply with Section 106 of the NHPA in accordance with the BLM's National Cultural Resources Programmatic Agreement and Arizona Protocol.
DFC-CL-03	All sites on BLM-administered lands will be managed according to the DFCs of their use allocation(s).
DFC-CL-04	Preservation/restoration will preserve existing original work and maintain it by restoration, replacement, or repair.
DFC-CL-05	Imminent threats from deterioration and potential conflicts with other resource uses on NPS-administered lands will be reduced, mitigated, or eliminated. All actions potentially impacting cultural resources will be assessed via compliance with section 106 of the NHPA and Director's Order 28 to achieve DFCs.
B. SPECIAL DESIGNATION	
SD-CL-01	The following ACEC designations will be revoked because Monument status provides protection of cultural resources: • Nampaweap (535 acres) • Witch Pool (279 acres)
C. LAND USE ALLOCATIONS	
LA-CL-01	The following sites will continue to be managed for public use (see Map 2.7): • Nampaweap • Sawmill Site • Temple Trail • Uinkaret Pueblo • Witch Pool • Tassi Ranch and Waring Ranch
LA-CL-02	The following additional sites will be allocated to public use: • Grand Gulch Mine • Pine Ranch

TABLE 2.7. CULTURAL RESOURCES (CL)	
Decision #	**Decision Text**
	• Lower Kent Ranch • Oak Grove Cabin
C. MANAGEMENT ACTIONS	
MA-CL-01	Historic structures that do not merit preservation because of minimal significance, advanced deterioration, or excessive cost will be recorded and allowed to deteriorate. Some removal of hazardous elements will be allowed for safety and to avoid an attractive nuisance.
MA-CL-02	Geocache sites will be prohibited in cultural sites including, but not limited to, archaeological sites, alcoves, rock shelters, cultural landscapes, traditional cultural properties (TCPs), and historic sites.
D. IMPLEMENTATION DECISIONS	
IMPL-CL-01	Interpretation of and education about previous human occupation and use of the area will be accomplished using appropriate sites and methods.
IMPL-CL-02	Protective measures will be taken to preserve significant sites, such as monitoring through patrol, signing, fencing, data recovery to mitigate vandalism, and stabilizing undamaged deposits, and preserving at risk features such as standing walls or historic structures.
IMPL-CL-03	The following implementation actions will occur at Tassi Ranch and Springs: • Components of the historic irrigation ditch system will be maintained to allow for preservation of Grand Wash Spring snail, an endemic species. • The historic landscape will be managed so that it maintains historic and ecological integrity. (See Vegetation Management decisions.) • The Tassi Ranch cultural landscape will be nominated for listing on the NRHP. • A cyclic maintenance program will continue
IMPL-CL-04	The following implementation actions will occur at Waring Ranch and Regional Cultural Landscape: • The Waring Ranch NRHP listing will be broadened to encompass the entire Kelly Point ranching landscape (Pine Ranch to Kelly Point). • Other features associated with Kelly Point ranching landscape will be examined and assessed for future stabilizing efforts. • Condition assessment and stabilization of outlying cultural resources will continue to be conducted
IMPL-CL-05	The Grand Gulch Mine buildings, Oak Grove Cabin, Pine Ranch, Lower Kent Ranch, and other historic properties will be mapped, stabilized, signed, and interpreted as they are identified, documented, and evaluated.

RESOURCES OF TRADITIONAL IMPORTANCE TO AMERICAN INDIANS	
A. DESIRED FUTURE CONDITIONS	
DFC-CL-06	Specific information on ancestral and traditional cultural places on the Monument will be protected to the extent allowable by law and, when appropriate, interpreted for the public.
DFC-CL-07	A good working relationship will be maintained with the Kaibab Paiutes, the Paiute Tribe of Utah, the Moapa Paiute Tribe, the Las Vegas Paiute Tribe, the San Juan Paiute Tribe, the Hopi Tribe, the Hualapai Tribe, the Havasupai Tribe, and the Navajo Nation, the latter being accomplished particularly through specific affected local chapters (Bodaway/Gap, Cameron, Coalmine, Coppermine, LeChee, and Tuba City).
DFC-CL-08	TCPs of importance and associated with American Indians whose cultural memory, traditions, and lives are closely associated with the Monument will be nominated to the NRHP.
DFC-CL-09	American Indians with cultural and historic ties to the Monument will have access to and use of sites allocated to traditional use, consistent with laws, regulations, and authorities.
B. MANAGEMENT ACTIONS	
MA-CL-03	Tribes will be consulted to determine limitations for use on sites allocated to Traditional Use areas.
MA-CL-04	Fees will not apply on BLM-administered lands to American Indians for the collection of non-commercial, personal use quantities of herbals, medicines, traditional use items, or items necessary for traditional, religious, or ceremonial purposes.

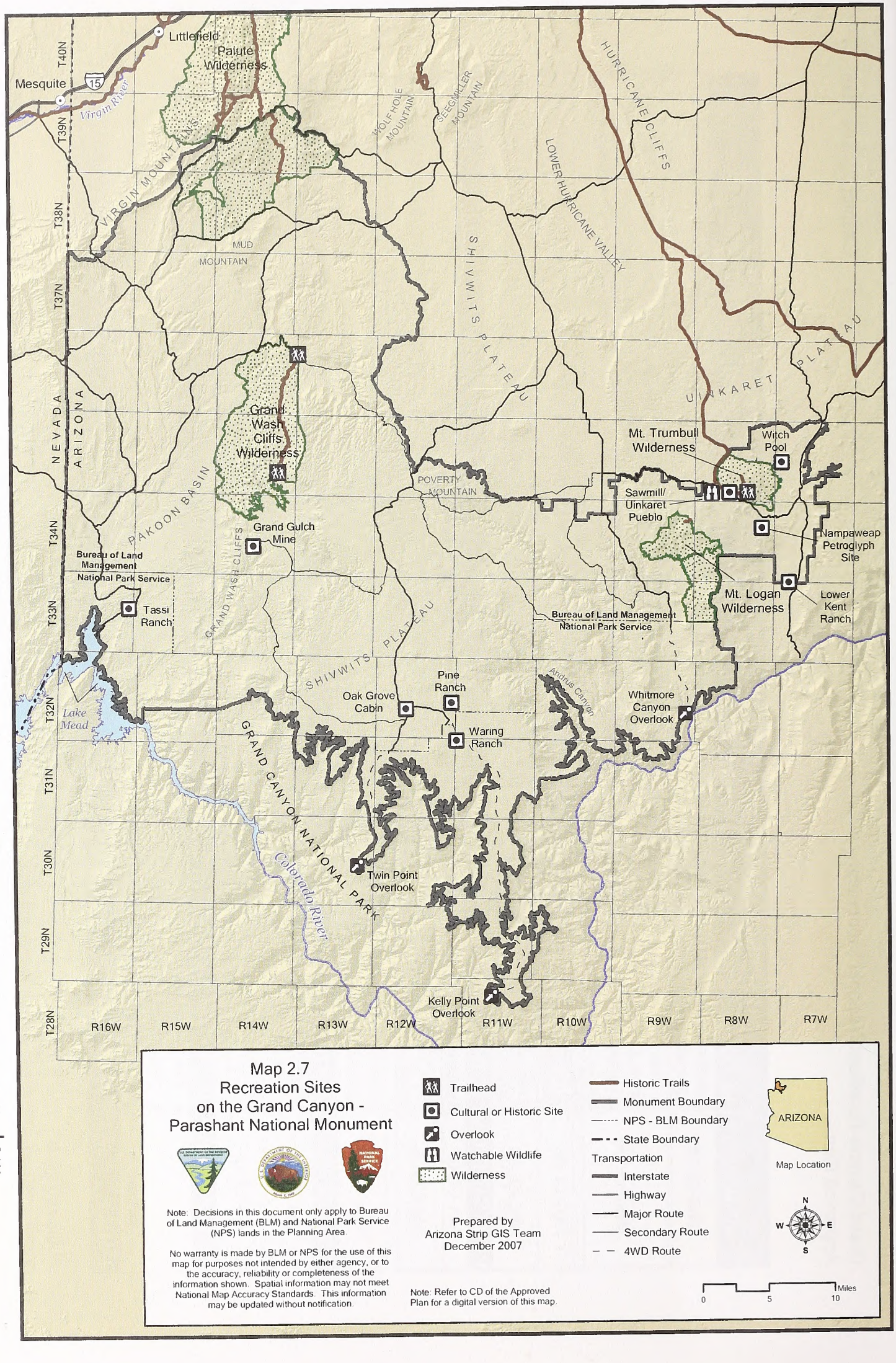

Map 2.7 Recreation Sites on the Grand Canyon - Parashant National Monument
Littlefield
Paiute Wilderness
Mesquite
Virgin River
T40N
T39N
T38N
T37N
T34N
T33N
T32N
T31N
T30N
T29N
T28N
R16W
R15W
R14W
R13W
R12W
R11W
R10W
R9W
R8W
R7W
NEVADA
ARIZONA
VIRGIN MOUNTAINS
MUD MOUNTAIN
WOLFHOLE MOUNTAIN
SEEGMILLER MOUNTAIN
HURRICANE CLIFFS
LOWER HURRICANE VALLEY
SHIVWITS PLATEAU
UINKARET PLATEAU
Grand Wash Cliffs Wilderness
PAKOON BASIN
GRAND WASH CLIFFS
POVERTY MOUNTAIN
Mt. Trumbull Wilderness
Witch Pool
Sawmill/ Uinkaret Pueblo
Nampaweap Petroglyph Site
Mt. Logan Wilderness
Lower Kent Ranch
Grand Gulch Mine
Bureau of Land Management
National Park Service
Tassi Ranch
Oak Grove Cabin
Pine Ranch
Waring Ranch
Andrus Canyon
Whitmore Canyon Overlook
Lake Mead
GRAND CANYON NATIONAL PARK
Colorado River
Twin Point Overlook
Kelly Point Overlook
Map 2.7
Recreation Sites
on the Grand Canyon -
Parashant National Monument
Note: Decisions in this document only apply to Bureau of Land Management (BLM) and National Park Service (NPS) lands in the Planning Area.
No warranty is made by BLM or NPS for the use of this map for purposes not intended by either agency, or to the accuracy, reliability or completeness of the information shown. Spatial information may not meet National Map Accuracy Standards. This information may be updated without notification.
Trailhead
Cultural or Historic Site
Overlook
Watchable Wildlife
Wilderness
Historic Trails
Monument Boundary
NPS - BLM Boundary
State Boundary
Transportation
Interstate
Highway
Major Route
Secondary Route
4WD Route
ARIZONA
Map Location
N
W
E
S
Prepared by
Arizona Strip GIS Team
December 2007
Note: Refer to CD of the Approved Plan for a digital version of this map.
0
5
10
Miles

TABLE 2.8. VISUAL RESOURCES (VR)	
Decision #	**Decision Text**
A. DESIRED FUTURE CONDITIONS	
DFC-VR-01	Public lands will be managed in a manner that will protect the quality of the scenic (visual) values of these lands. (43 U.S. Code [USC] 1701, Section 102 (a) (8))
DFC-VR-02	Esthetically pleasing surroundings will be assured for all Americans (43 USC 4321, Section 101 (b)).
DFC-VR-03	The region's scenic beauty, open space landscapes, and other high-quality visual resources, including Monument objects, will be maintained within the Monument.
DFC-VR-04	The existing "footprint" of cultural landscapes (facilities, projects, and improvements) will generally be maintained.
DFC-VR-05	Dark night sky conditions that are affected primarily by natural light sources will be maintained.
DFC-VR-06	There are four visual resource management (VRM) classes. The objectives for each class, which provide visual management standards for the design and development of future projects and for rehabilitation of existing projects in the Monument are as follows (See Appendix H: VRM Classes and Map 2.8 for class areas). Class 1 - The objective of this class is to preserve the existing character of the landscape. This class provides for natural ecological changes; however, it does not preclude very limited management activity. The level of change of the characteristic landscape should be very low and must not attract attention. Class 2 - The objective of this class is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape. Class 3 - The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape. Class 4 - The objective of this class is to provide for management activities that require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management activities may dominate the view and be the major focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic elements.
DFC-VR-07	Visual resources identified in the Monument proclamation, such as *impressive landscapes; open, undeveloped spaces; engaging scenery; colorful vistas; rugged and beautiful canyons; colorful, lava-capped strata; spectacular geology; and* will be protected

TABLE 2.8. VISUAL RESOURCES (VR)	
Decision #	**Decision Text**
B. LAND USE ALLOCATIONS	
LA-VR-01	The following VRM classes will be designated to support management of the various other resources, such as designated and proposed wilderness, primary travel corridors, areas where wilderness characteristics will be maintained, certain special recreation management areas, and important watershed and wetland areas (Map 2.8). BLM and NPS-administered lands Class I: 291,237 acres Class II: 592,681 acres Class III: 164,389 acres Class IV: 11 acres
C. MANAGEMENT ACTIONS	
MA-VR-01	• To the extent opportunities are practicable, extreme visual contrast created by past management practices or human activities will be minimized. Examples can include abandoned mines and areas impacted by unauthorized off-road driving, etc. • Basic criteria for "practicality" can include 1) location (will the site be in an area with high visual sensitivity and in a foreground/middleground distance zone as mapped in the visual resource inventory?), 2) feasibility (will it be physically possible to achieve a desired level of restoration success, as measured by use of the contrast rating process?), and 3) cost (will the cost be reasonable and is funding obtainable?).
New Projects and Activities	
MA-VR-02	Ecosystem restoration projects will ensure that visual impacts are minimized in the short term (5 years) and that VRM objectives in the project area are met in the long term (life of the project) when such projects are a) considered essential for public safety, achieving DFCs, or reducing hazardous fuels buildups and b) expected to be visually prominent.
MA-VR-03	All new surface disturbing projects or activities, regardless of size or potential impact, will incorporate visual design considerations during project design as a reasonable attempt to meet the VRM objectives for the area and minimize the visual impacts of the proposal. Visual design considerations will be incorporated by: • Using the VRM contrast rating process (required for proposed projects in highly sensitive areas, high impact projects, or for other projects where it will appear to be the most effective design or assessment tool), or by • Providing a brief narrative visual assessment for all other projects that require an environmental assessment (EA) or environmental impact statement (EIS). Measures to mitigate potential visual impacts can include the use of natural materials, screening, painting, project design, location, or restoration. (See Appendix H; BLM Handbook H-8431-1, Visual Resource Contrast Rating; or online at http://www.blm.gov/nstc/VRM/8431.html, for information about the contrast rating process.)

TABLE 2.8. VISUAL RESOURCES (VR)	
Decision #	**Decision Text**
	Night Sky
MA-VR-04	Permanent outdoor lighting in VRM Class I areas will not be allowed.
MA-VR-05	Impacts to dark night skies will be prevented or reduced through the application of specific mitigation measures identified in activity level planning and NEPA level review. These measures may include directing all light downward, using shielded lights, using only the minimum illumination necessary, using lamp types such as sodium lamps (less prone to atmospheric scattering), using circuit timers, and using motion sensors.
MA-VR-06	Any facilities authorized will use the best technology available to minimize light emissions.

TABLE 2.9. SOUNDSCAPES (SN)	
Decision #	**Decision Text**
A. DESIRED FUTURE CONDITIONS	
DFC-SN-01	Natural quiet and natural sounds will be preserved or restored, where practicable.
B. MANAGEMENT ACTIONS	
MA-SN-01	Under any Section 4(f) consultations with the Federal Aviation Administration (FAA), the BLM and NPS will recommend the protection or restoration of natural quiet in and above noise sensitive areas defined as all statutory wilderness areas, National Monument, and all areas managed to maintain wilderness characteristics.
MA-SN-02	The NPS will develop a Soundscape Management Plan for the NPS-administered lands in coordination with similar Lake Mead NRA plans.

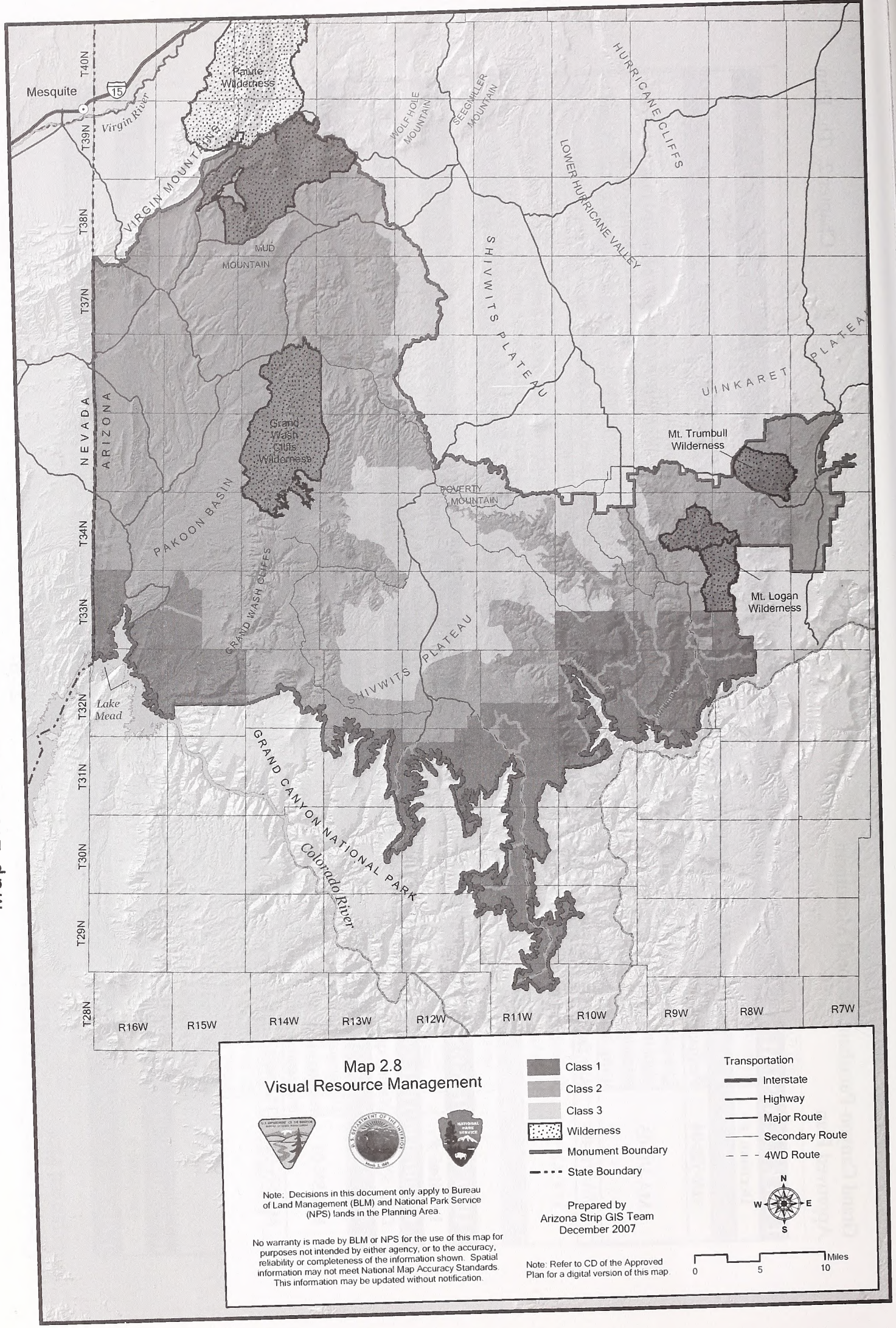
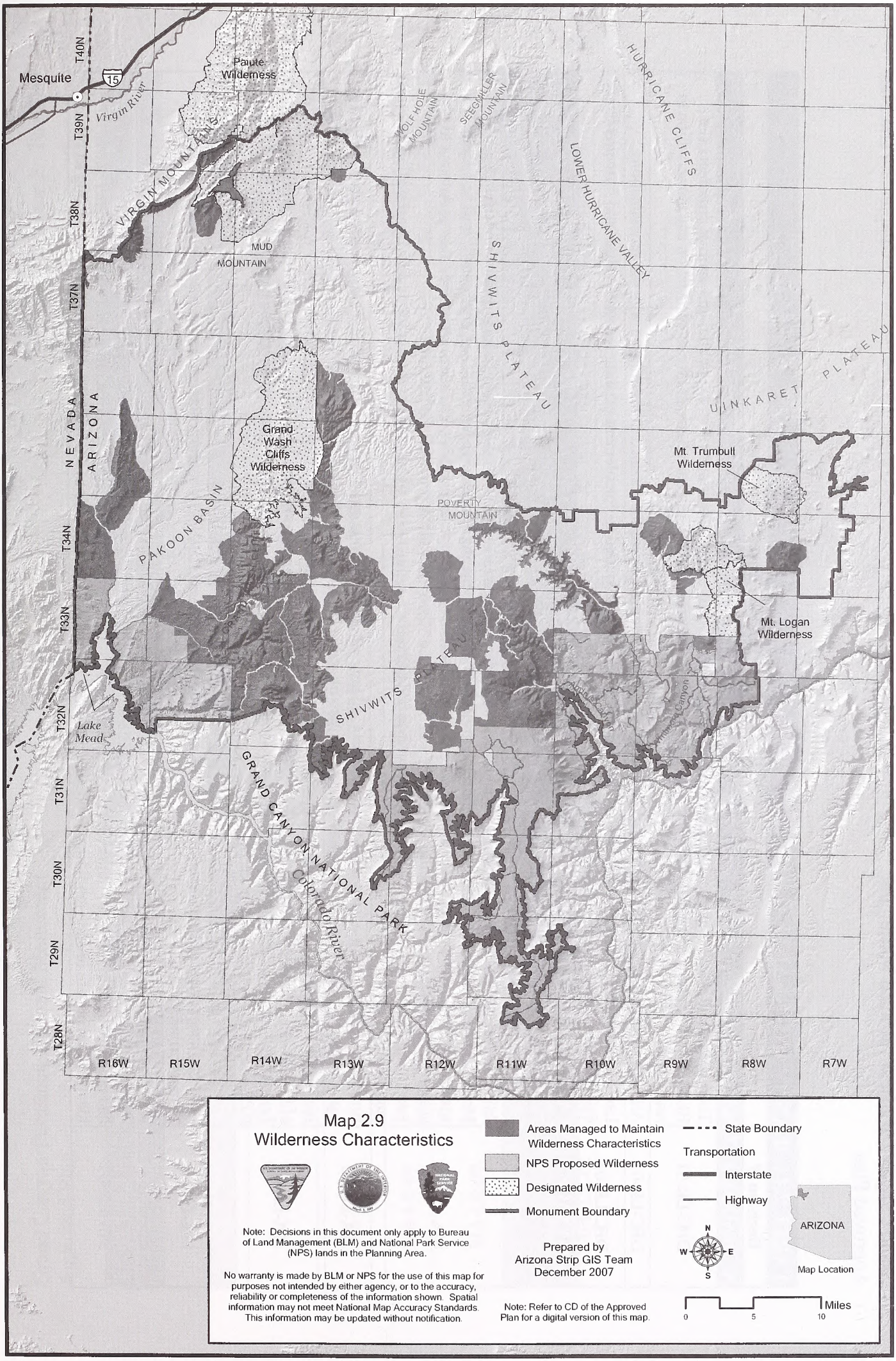

Map 2.8 Visual Resource Management
Mesquite
Virgin River
Paiute Wilderness
VIRGIN MOUNTAINS
WOLF HOLE MOUNTAIN
SEEGMILLER MOUNTAIN
HURRICANE CLIFFS
LOWER HURRICANE VALLEY
MUD MOUNTAIN
SHIVWITS PLATEAU
UINKARET PLATEAU
NEVADA
ARIZONA
Grand Wash Cliffs Wilderness
Mt. Trumbull Wilderness
POVERTY MOUNTAIN
PAKOON BASIN
GRAND WASH CLIFFS
Mt. Logan Wilderness
Lake Mead
GRAND CANYON NATIONAL PARK
Colorado River
T40N
T39N
T38N
T37N
T34N
T33N
T32N
T31N
T30N
T29N
T28N
R16W
R15W
R14W
R13W
R12W
R11W
R10W
R9W
R8W
R7W
Map 2.8
Visual Resource Management
Class 1
Class 2
Class 3
Wilderness
Monument Boundary
State Boundary
Transportation
Interstate
Highway
Major Route
Secondary Route
4WD Route
N
W
E
S
Note: Decisions in this document only apply to Bureau of Land Management (BLM) and National Park Service (NPS) lands in the Planning Area.
No warranty is made by BLM or NPS for the use of this map for purposes not intended by either agency, or to the accuracy, reliability or completeness of the information shown. Spatial information may not meet National Map Accuracy Standards. This information may be updated without notification.
Prepared by
Arizona Strip GIS Team
December 2007
Note: Refer to CD of the Approved Plan for a digital version of this map.
0
5
10
Miles

TABLE 2.10. WILDERNESS CHARACTERISTICS (WC)	
Decision #	**Decision Text**
A. DESIRED FUTURE CONDITIONS	
DFC-WC-01	The following wilderness characteristics will be maintained on both BLM and NPS-administered lands: • High Degree of Naturalness: Lands and resources affected primarily by the forces of nature and where the imprint of human activity is substantially unnoticeable. • Outstanding Opportunities for Solitude: When the sights, sounds, and evidence of other people are rare or infrequent (and) where visitors can be isolated, alone or secluded from others. • Outstanding Opportunities for Primitive and Unconfined Recreation: Where the use of the area will be through non-motorized, non-mechanical means, and where no or minimal developed recreation facilities are encountered.
DFC-WC-02	Areas where wilderness characteristics will be maintained will be ecologically sustainable and resilient to natural and human-caused disturbances. (See Vegetation Management decisions.)
DFC-WC-03	Wildlife populations and habitat are important aspects of the ecosystem and are an important component of naturalness.
DFC-WC-04	Wildlife management activities will be consistent with naturalness in areas having wilderness characteristics
B. LAND USE ALLOCATION	
LA-WC-01	Formal allocations will not be made for areas where wilderness characteristics will be maintained, nor will these acres be designated as Wilderness Study Areas (WSAs) or proposed for wilderness in this Approved Plan. Decisions to maintain wilderness characteristics will apply to the following area (See Map 2.9): 215,345 acres
C. MANAGEMENT ACTIONS	
Visual Resource Management	
MA-WC-01	Any changes to the characteristic landscape must be very low on 5,575 acres, low on 180,183 acres, can be moderate on 29,587 acres, and high on 0 acres.
Land Tenure	
MA-WC-02	The BLM will retain lands in Federal ownership and seek to acquire non-Federal lands and interests in lands in areas managed to maintain wilderness characteristics.
Restoration	
MA-WC-03	Restoration, vegetation treatments, wildlife management projects on BLM-administered lands, and other surface disturbing actions can be authorized in areas managed to maintain wilderness characteristics to achieve DFCs. (See Vegetation Management decisions.)
MA-WC-04	New projects or maintenance of existing projects that enhance wildlife habitat or other resources can be allowed, provided they can be designed to be substantially unnoticeable over time.

TABLE 2.10. WILDERNESS CHARACTERISTICS (WC)	
Decision #	**Decision Text**
MA-WC-05	Natural processes will be primarily relied on to restore, over time, locations where human imprints are found. When natural process will not restore areas within a reasonable timeframe or when resource damage will continue, a mix of chemical, biological, mechanical, and fire tools will be used consistent with DFCs of areas managed for wilderness characteristics.
Fire Management	
MA-WC-06	Within areas managed to maintain wilderness characteristics, the BLM and NPS will use minimum impact suppression tactics (MIST) to manage fire. Fire management actions will be consistent with DFCs for wilderness characteristics described in the Fire Management Plan. (See Vegetation Management decisions.)
Motorized and Mechanized Uses	
MA-WC-07	Use of non-motorized, wheeled game carriers to retrieve game kills will be allowed in areas managed to maintain wilderness characteristics.
Competitive Events	
MA-WC-08	Non-motorized competitive events can be authorized where wilderness characteristics will be maintained provided they are consistent with achieving DFCs and, in the Monument, consistent with the proclamations.
Land Use Authorizations	
MA-WC-09	New ROWs will be discouraged within avoidance areas, which include areas managed to maintain wilderness characteristics. On BLM-administered lands, an exception can be granted for communication sites necessary for public safety where no other suitable sites are available. (See Lands and Realty decisions.) Existing land use authorizations (ROWs, permits, leases, etc.) will be administered within areas managed to maintain wilderness characteristics in accordance with the terms and conditions of the authorizations.



Map 2.9 Wilderness Characteristics

TABLE 2.11. LANDS AND REALTY (LR)	
Decision #	**Decision Text**
A. DESIRED FUTURE CONDITIONS	
DFC-LR-01	The Lands and Realty Program will respond effectively to the needs of external customers (i.e., the public) and internal customers (i.e., BLM and NPS resource programs) for the use and enjoyment of current and future generations and for the protection and conservation of resources.
DFC-LR-02	All Federal lands (both BLM and NPS administered) within the Monument will be retained in accordance with the proclamations.
DFC-LR-03	Lands or interests in lands (both BLM and NPS administered) can be acquired to complement existing resource values and further/enhance the objectives of the proclamation/Monument.
B. MANAGEMENT ACTIONS	
Land Tenure Decisions	
Acquisitions/Retentions	
MA-LR-01	All BLM and NPS-administered lands and interests in lands (including minerals) will be retained in Federal ownership within the Monument. Non-federally-administered lands and interests in lands (including legal access to landlocked public land) will be acquired within the Monument by BLM/NPS from willing sellers by purchase, exchange, or donation. Exchanges with the State of Arizona to acquire state land interests within the Monument will be pursued when the State is provided the authority. Interests in land include, but are not limited to, surface and subsurface rights, water rights, and easements for access, conservation, or other purposes.
MA-LR-02	Both BLM and NPS-administered lands and interests in lands within the Monument will, upon acquisition, be reserved and/or managed as a part of the Monument, wilderness, etc., consistent with planning guidance and objectives.
MA-LR-03	In split estate situations a) where the surface estate is in Federal ownership and the mineral estate is in non-Federal ownership, acquisition of the mineral estate will be pursued on all BLM and NPS-administered lands within the Monument; and b) where the mineral estate is in Federal ownership and the surface estate is in non-Federal ownership, acquisition of the surface estate will be pursued on all BLM and NPS-administered lands within the Monument.
Disposals	
MA-LR-04	Land exchanges may be considered within the Monument where site-specific NEPA analysis determines the protective purposes of the Monument will be furthered.
Land Use Authorizations	
MA-LR-05	No new ROWs or ancillary public facilities should be processed within the Monument except for a) ROWs pursuant to existing policies and practices such as, but not limited to, scientific monitoring stations, repeaters, utilities, water facilities, and access or other needs identified on private or state inholdings, public facilities, or administrative sites; and b) ROWs within the boundary of existing ROWs or

TABLE 2.11. LANDS AND REALTY (LR)	
Decision #	**Decision Text**
	designated ROW corridors. ROWs will only be authorized where site-specific NEPA analysis determines that the proposed action is consistent with protections required by the Monument proclamations and with DFCs described in the Approved Plan. Mitigation measures may include underground placement of linear ROWs along existing roads and special protection measures for archaeological resources, among others. (See Special Status Species and Cultural Resources decisions.)
MA-LR-06	New ROWs authorizing new physical facilities (new tower or building) at Mt. Logan and Hudson (West Point) communication sites will not be allowed. Upgrades to the facilities/site that do not change the existing footprint or esthetics of the site may be allowed on a case-by-case basis, if necessary, to allow additional uses in the existing facilities.
MA-LR-07	On BLM-administered lands, minimum impact permits within the Monument will be evaluated and authorized on a case-by-case basis where site-specific NEPA analysis determines that impacts to the objects or values for which the Monument were designated will be negligible.
MA-LR-08	Existing ROWs in BLM wilderness areas (i.e., exclusion areas) will be evaluated prior to expiration, and if still needed, will be authorized under 43 CFR 2920.
MA-LR-09	The unoccupied Lime Kiln Utility Corridor shown on the Western Utility Group priority corridor map beginning at the Navajo McCullough power line on the Arizona Strip FO, crossing through the northern portion of Parashant, and ending on the Arizona Strip FO at the Arizona/Nevada state line will be terminated. A portion of this corridor now lies within Parashant which precludes use of this segment of the corridor altogether.
C. IMPLEMENTATION DECISIONS	
IMPL-LR-01	Nixon Spring Administrative Site withdrawal (PLO 5413, March 21, 1974) will be recommended for revocation.
IMPL-LR-02	The Hybrid Oak Withdrawal will be recommended for revocation (318 total acres; 164 in Parashant and 154 in Arizona Strip FO).

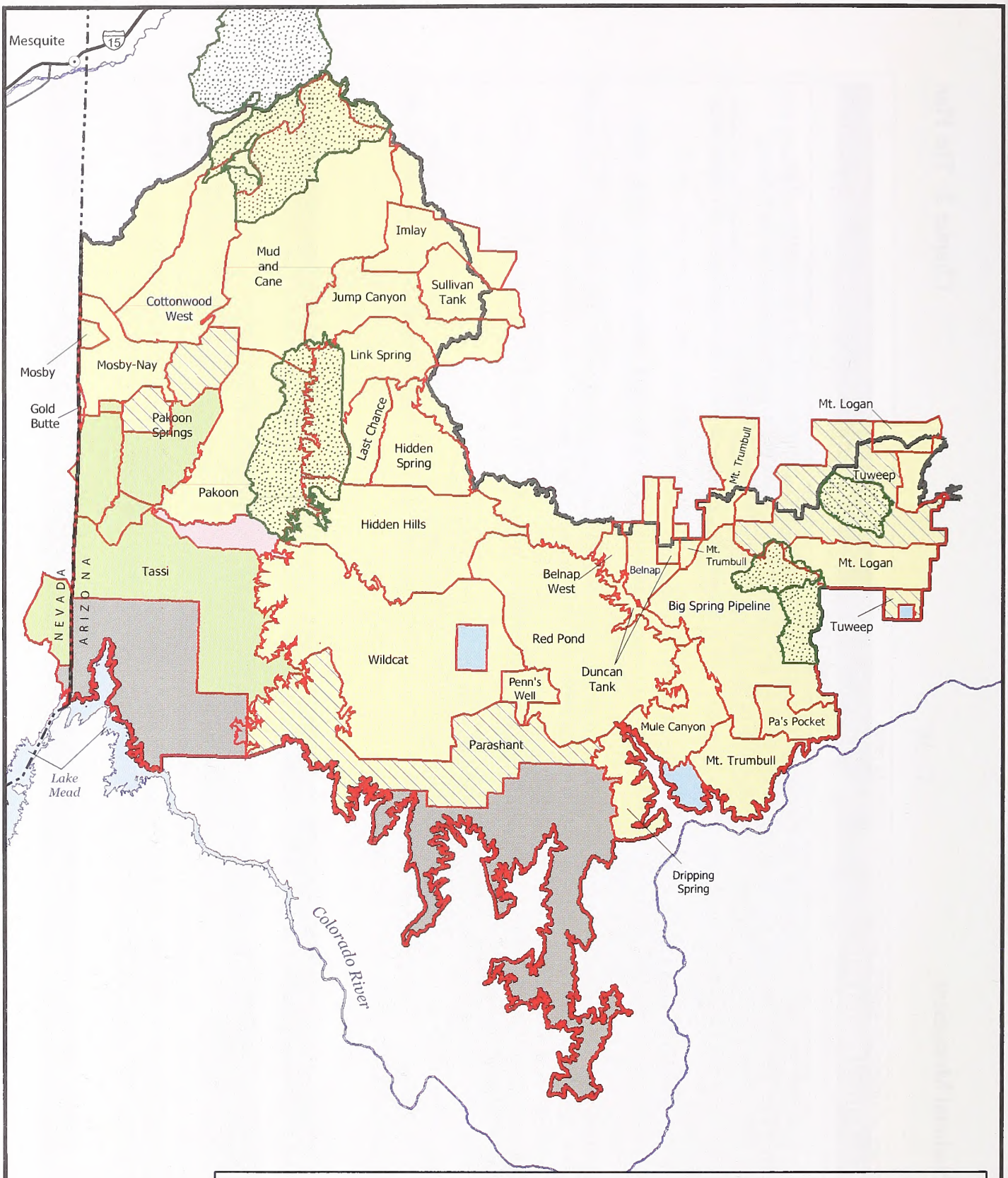
TABLE 2.12. LIVESTOCK GRAZING (GM)	
Decision #	**Decision Text**
A. DESIRED FUTURE CONDITIONS	
DFC-GM-01	Healthy, sustainable rangeland ecosystems will be maintained or improved to meet Arizona's Standards for Rangeland Health (1997; Appendix C) and Vital Sign Standards on NPS-administered lands, and produce a wide range of public values such as wildlife habitat, livestock forage, recreation opportunities, clean water, and functional watersheds.
DFC-GM-02	Livestock use and associated management practices will be conducted in a manner consistent with other resource needs and objectives to ensure that the health of rangeland resources is preserved or improved so that they are productive for all rangeland values. Where needed, public rangeland ecosystems will be improved to meet objectives.
DFC-GM-03	Sensitive resources on NPS-administered lands will demonstrate no long-term degradation due to livestock grazing management techniques and restoration actions.
DFC-GM-04	Monument values will be maintained, protected, and improved.
B. LAND USE ALLOCATIONS	
LA-GM-01	On BLM-administered lands, all allotments will continue to be classified as available for grazing by livestock under the principle of multiple use and sustained yield, except where specifically noted (see Map 2.10).
LA-GM-02	By administrative action in 1990, grazing on the NPS portion of the Parashant Allotment was made unavailable in perpetuity. The allotment boundaries are modified to include only BLM-administered lands.
LA-GM-03	Livestock grazing on the Home Ranch Allotment was terminated based on a 1967 written agreement between NPS and the grazing permittee and is therefore unavailable in perpetuity. The allotment no longer exists.
LA-GM-04	The Tassi Allotment described in the 1998 LUP Amendment will continue to be unavailable for grazing. (See Special Status Species decisions.) By administrative action at the same time, that portion of the Tassi Allotment on NPS-administered lands was made unavailable in perpetuity for grazing. The allotment boundaries are modified to include only BLM-administered lands.
LA-GM-05	The portion of the Mosby-Nay Allotment within the former Pakoon ACEC will be unavailable for grazing. The remainder of the allotment will be available for grazing. (See Special Status Species decisions.)
LA-GM-06	Those portions of the Pakoon Springs Allotment within the former Pakoon ACEC will be unavailable for grazing. In addition, the unavailable area will be expanded from the southern allotment boundary north up Pakoon Wash approx. 3 miles, and up Cedar Wash and Cottonwood Wash to approx. Wayne's Well. This will include the Pakoon Springs area.
LA-GM-07	The entire Pakoon Allotment will be available for grazing, including the area within the former Pakoon ACEC (Grand Gulch Wash area). (See Special Status Species decisions.)
LA-GM-08	Tuweep Allotment will be authorized for yearlong grazing in accordance with the approved AMP.

TABLE 2.12. LIVESTOCK GRAZING (GM)	
Decision #	**Decision Text**
C. MANAGEMENT ACTIONS	
MA-GM-01	On NPS-administered lands, livestock grazing will be administered within NPS policy, the proclamation, and Lake Mead NRA enabling legislation, and verified through the Vital Signs monitoring program. On NPS-administered lands, when appropriate, the implementation of BLM standards and guidelines may be modified for use on NPS-administered lands by incorporating NPS Vital Signs initiatives. Any land health standards applied on NPS-administered lands will be in compliance with NPS Management Policies (2006).
MA-GM-02	Changes in kind of livestock to sheep or goats will not be authorized within nine miles of desert bighorn sheep habitat. Sheep and goats will not be authorized as pack stock within nine miles of desert bighorn sheep habitat. Sheep or goats will not be authorized on NPS-administered lands. (See Wildlife and Fish decisions.)
	Animals other than cattle and horses will not be authorized for livestock grazing purposes on NPS-administered lands.
MA-GM-03	Implementing the Arizona Standards for Rangeland Health will continue on all grazing allotments in accordance with established schedules and congressional requirements. The Arizona Standards for Rangeland Health and guidelines for grazing management will apply to all livestock grazing activities on BLM and NPS-administered lands consistent with the appropriate enabling legislation. These guidelines address management practices at the grazing allotment management plan (AMP) level and are intended to maintain desirable conditions or improve undesirable rangeland conditions within reasonable time frames. (See Appendix C.)
MA-GM-04	The interdisciplinary allotment evaluation process will continue to be used to provide specific guidance and actions for managing livestock grazing. Existing AMPs and other activity plans will be consistent with achieving the DFCs and standards for rangeland health. They will contain the site-specific management objectives, as well as actions, methods, tools, and appropriate monitoring protocols.
MA-GM-05	Existing management practices and levels of use on grazing allotments will be reviewed and evaluated on a priority basis to determine if they meet or are making progress toward meeting the Arizona Standards for Rangeland Health on BLM and NPS-administered lands and Vital Sign standards on NPS-administered lands. Appropriate and timely actions will be implemented to deal with those areas not meeting the standards.
MA-GM-06	The allotment management categorization process will continue to be used to define the level of management needed to properly administer livestock grazing according to management needs, resource conflicts, potential for improvement, and BLM funding/staffing constraints. The allotment categories are Custodial (C), managed custodially to protect resource conditions and values; Maintain (M), managed to maintain current satisfactory resource conditions and are actively managed to ensure that the condition of resource values do not decline; and Improve (I), actively managed to improve unsatisfactory resource conditions.
MA-GM-07	The category of grazing allotments will be changed as objectives are accomplished and/or conditions change. See Appendix D for current specific allotment category assignments, grazing systems, preference, etc.
MA-GM-08	Allowable use on key forage species is 50% on allotments with rotational grazing systems except in tortoise habitat. On allotments in desert tortoise habitat or being less intensively managed, utilization is set at 45%.

TABLE 2.12. LIVESTOCK GRAZING (GM)	
Decision #	**Decision Text**
MA-GM-09	Any hay or other feed used in administering the livestock operation will be certified weed-free.
MA-GM-10	Water developments in listed species habitats can be modified to minimize adverse effects to the species. (See Special Status Species decisions.)
MA-GM-11	Season of use and other management prescriptions consistent with achieving DFCs, will be established on that portion of the Mosby-Nay Allotment outside the former Pakoon ACEC, and available for grazing.
MA-GM-12	• That portion of the Pakoon Springs Allotment, which remains available for grazing, will be managed as a forage reserve for livestock grazing. Season of use and other management prescriptions consistent with achieving DFCs, will be established along with a management plan detailing specifics of grazing use. The management plan will be developed in cooperation with permittees and interested parties. • The option to reconfigure the allotment or any portion of the allotment to protect other priority resource values and/or promote more effective management as provided in 43 CFR 4110.2-4 will be considered. (See Special Status Species decisions.) • Under the forage reserve concept, any livestock use will be on a temporary basis. Livestock grazing use will be at BLM's discretion and will be designed to complement management of desert tortoise habitat, both inside this allotment and other allotments with desert tortoise habitat, and to provide rest and deferment on other allotments undergoing restoration treatments, areas with fire damage, or other actions that establish an AMP or livestock grazing system. • Under the forage reserve concept, the BLM will assume maintenance of those facilities determined to be necessary for orderly protection and management of resources, including existing water developments on land the BLM continues to manage in the Pakoon Springs Allotment to ensure availability for wildlife use.
MA-GM-13	• Grazing use within the former Pakoon ACEC portion (Grand Gulch Wash area) of the Pakoon Allotment will not be allowed between March 15 and October 15. Fencing at Eds' Pond will be required to facilitate this restriction. (See Special Status Species decisions.) • Season of use and other management prescriptions consistent with achieving DFCs will be established on the entire allotment, along with a management plan detailing specifics of grazing use. • Ephemeral extensions can be authorized on the lands outside the former Pakoon ACEC, in the Pakoon Allotment to June 1 when conditions outlined in Guideline 3-5, of the Arizona Standards for Rangeland Health are met.
MA-GM-14	• The BLM portion of the Parashaunt Allotment will continue to be managed as a forage reserve. Under the forage reserve concept, any livestock use will be on a temporary basis. Livestock grazing use will be at BLM's discretion and will be designed to complement management of other resources and to provide rest and deferment on other allotments undergoing restoration treatments, areas with fire damage, or other actions that establish an AMP or livestock grazing system, and help stabilize the livestock industry. • Under the forage reserve concept, the BLM will assume maintenance of those facilities determined to be necessary for orderly protection and management of resources, including existing water developments on land the BLM continues to manage in the Parashaunt Allotment to ensure availability for wildlife use.

TABLE 2.12. LIVESTOCK GRAZING (GM)	
Decision #	**Decision Text**
	• A management plan has been developed for the Parashaunt allotment in cooperation with permittees and interested parties. The management plan specifies how the allotment will be managed, as well as season of use and other management consistent with achieving DFCs. This plan will be updated upon completion of the LUP or as needed to keep it current.
MA-GM-15	• Tuweep Allotment will be managed as a forage reserve allotment with livestock grazing being at the BLM's discretion, consistent with achieving DFCs. • Under the forage reserve concept, any livestock use will be on a temporary basis. • The option to reconfigure the allotment or any portion of the allotment to protect other priority resource values and/or promote more effective management as provided in 43 CFR 4110.2-4 will be considered. • A management plan will be developed for the allotment in cooperation with permittees and interested parties. The management plan will specify how the allotment will be managed, as well as season of use and other management consistent with achieving DFCs. • Under the forage reserve concept, the BLM will assume maintenance of those facilities determined to be necessary for orderly protection and management of resources, including existing water developments on land the BLM continues to manage in the Tuweep Allotment to ensure availability for wildlife use.
MA-GM-16	Acquired lands will be incorporated into the management scheme for the Tuweep Allotment.
MA-GM-17	Livestock grazing use on the Tuweep Allotment will be managed to complement current and future forest restoration research, and to provide rest and deferment on other allotments undergoing restoration treatments, areas with fire damage, or other actions that establish an AMP or livestock grazing system.

TABLE 2.13. MINERALS MANAGEMENT (MI)	
Decision #	**Decision Text**
A. LAND USE ALLOCATION	
Salable Minerals	
LA-MI-01	The BLM, NPS, and county will continue to use mineral materials from existing material sites, washes, arroyos, and stock tanks on BLM-administered lands for road maintenance projects provided the use is consistent with Plan objectives and protection of Monument objects.
LA-MI-02	NPS-administered lands within Parashant are closed to mineral entry (Lake Mead NRA Minerals Management Plan, 1986).



Map 2.10
Grazing Allotments

Grazing Allotments

Allotment Categories*

- Available
- Available with Seasonal Restrictions
- Unavailable
- Unavailable in Perpetuity
- Outside of an Allotment

- Forage Reserve
- Wilderness
- Monument Boundary
- State Boundary
- Interstate
- Highway

Note: Decisions in this document only apply to Bureau of Land Management (BLM) and National Park Service (NPS) lands in the Planning Area.

No warranty is made by BLM or NPS for the use of this map for purposes not intended by either agency, or to the accuracy, reliability or completeness of the information shown. Spatial information may not meet National Map Accuracy Standards. This information may be updated without notification.

Prepared by
Arizona Strip GIS Team
December 2007

* Private and state land is not shown on this map.

Note: Refer to CD of the Approved Plan for a digital version of this map.

N W E S

ARIZONA

Map Location

Miles
0 5 10

TABLE 2.14. RECREATION & VISITOR SERVICES/INTERPRETATION & ENVIRONMENTAL EDUCATION (RR)	
Decision #	**Decision Text**
RECREATION & VISITOR SERVICES	
A. DESIRED FUTURE CONDITIONS	
DFC-RR-01	Recreation and visitor services will be managed to provide varying levels of structured recreation opportunities that offer a range of specific benefits, activities, and experiences within outdoor settings (Special Recreation Management Areas [SRMAs]; See Map 11).
DFC-RR-02	Information needed to plan, prepare, and choose safe, enjoyable and appropriate uses of the Monument will be available to the public.
DFC-RR-03	The NPS and BLM will work to provide seamless service to the public and use their resources accordingly
DFC-RR-04	Existing opportunities for visitors to enjoy sightseeing and viewing wildlife in the Backways TMAs will be maintained/enhanced.
DFC-RR-05	The excellent opportunities that exist to enjoy remote, rustic settings that provide moderate challenge and solitude in the Specialized TMAs will be maintained/enhanced.
DFC-RR-06	In Backways and Specialized TMAs, recreation opportunities associated with somewhat remote settings, such as exploring backcountry roads, vehicle camping, hunting, sightseeing, recreation aviation, and picnicking will be maintained/enhanced on existing roads, provided they will be compatible with the protection and enhancement of sensitive resource values and Monument objects, where appropriate.
DFC-RR-07	In the Primitive TMA, high quality recreation opportunities associated more with primitive recreation experience opportunities and non-motorized uses such as camping, sightseeing, hiking, horseback riding, and hunting, will be maintained/enhanced, provided they will be compatible with the protection and enhancement of sensitive resource values and Monument objects, where appropriate.
DFC-RR-08	NPS-administered lands will be managed primarily for their wilderness values, and in accordance with Primitive TMA objectives.
Specific Recreation Management Area	
DFC-RR-09	One type of Recreation Management Area (RMAs) is identified in the land use plan for the Monument, SRMAs, which are also identified as Special Management Areas (SMAs) on NPS-administered lands.
DFC-RR-10	NPS SMAs typically involve the NPS proposed wilderness areas, as well as any areas managed to maintain wilderness characteristics. SMA management will be blended with SRMA management in the Parashant where appropriate.
DFC-RR-11	Section A.2. of Table 2.14 above describes the specific DFCs for each SRMA. The conditions described for a given SRMA is targeted for that SRMA where it is allocated. Each SRMA will target a distinct, primary recreation-tourism market as well as a corresponding and distinguishing recreation management strategy, such as Community, Destination, or Undeveloped (see Glossary). In identifying SRMAs and prescribing the management regime for each, a benefits-based management (BBM) approach will be utilized. BBM or "beneficial outcomes" focuses on the desired outcomes of recreation and leisure activities tied to experiences and benefits.
DFC-RR-12	Within each SRMA, one or more potential Recreation Management Zones (RMZs) will be identified, with each zone providing for a particular recreation niche (see Glossary) within the overall SRMA. (See Map 2.11 for SRMAs and Map 2.12 for RMZs). Each RMZ will

TABLE 2.14. RECREATION & VISITOR SERVICES/INTERPRETATION & ENVIRONMENTAL EDUCATION (RR)	
Decision #	**Decision Text**
	be characterized by a description of its own DFCs in the form of outcomes (management objective(s), benefits, experiences, activities) and the setting prescriptions (physical, social, and administrative conditions) required to produce the outcomes. (See Appendix J and Maps 2.13 to 2.15 for setting allocations).
DFC-RR-13	The primary strategy for the Parashant SRMA/NPS SMA will be to target a demonstrated undeveloped recreation-tourism market demand from local community and regional/national visitors for trophy hunting opportunities, guided backcountry tours, hiking, viewing and appreciating wildland landscapes and cultural sites, canyoneering and motorized/mechanized/non-mechanized exploring. This demand is supported by the area's distinctive remote, rugged landscape; its proximity to the Grand Canyon; its vast size; and the largely open and undeveloped character of its recreation settings. Regional and local recreation-tourism visitors value this area for the distinctive kinds of dispersed recreation it produces. (See Appendix J for more information.)
DFC-RR-14	The Shivwits Frontier RMZ will be managed for: • Sustainable access for scenic, natural, open-space appreciation, and exploration recreation adventure somewhat close to nearby communities. • By the year 2010, this zone will be managed to produce opportunities for visitors to enjoy sustainable, multiple travel mode access to scenic, natural, open-space settings for both day and overnight recreation, providing no less than 75% of responding visitors and affected community residents at least a "moderate" realization of these benefits (i.e., 3.0 on a probability scale where 1=not at all, 2=somewhat, 3=moderate, 4=total realization). • Vehicle exploring, camping, hunting, hiking, viewing scenery. • Enjoying going out exploring on my/our own; feeling good about solitude, being isolated and independent; developing your skills and abilities • *Personal Benefits*: Improved skills for outdoor enjoyment; greater self-reliance; closer relationship with the natural world; greater sense of adventure; improved mental well-being; greater sensitivity to/awareness of outdoor aesthetics, nature's art and its elegance • *Environmental Benefits*: Increased awareness and protection of natural landscapes The RMZ will be managed to produce recreation opportunities in the following essential settings (See Appendix J for setting descriptions): • *Physical Benefits*: Semi-Primitive Non-Motorized to Roaded Natural, with regard to remoteness and Primitive to Roaded Natural, with regard to naturalness and recreation facilities • *Social Benefits*: Semi-Primitive Non-Motorized to Roaded Natural, with regard to group size; Primitive to Semi-Primitive Motorized, with regard to evidence of use and contacts • *Administrative Benefits*: Primitive to Roaded Natural, with regard to visitor services; Primitive to Semi-Primitive Motorized, with regard to management controls; and Primitive to Rural, with regard to mechanized/motorized use (See Travel Management Section for decisions regarding access for administrative uses)

TABLE 2.14. RECREATION & VISITOR SERVICES/INTERPRETATION & ENVIRONMENTAL EDUCATION (RR)	
Decision #	**Decision Text**
DFC-RR-15	The Parashant Wildlands RMZ will be managed for: • Extreme, world class, deep wildlands exploration in remote and rugged Grand Canyon country. • Recreation adventure in the rugged, canyons and cliffs adjacent to Grand Canyon, providing no less than 75% of responding visitors and affected community residents at least a "moderate" realization of these benefits (i.e., 3.0 on a probability scale where 1=not at all, 2=somewhat, 3=moderate, 4= total realization). A separate NPS WHP will be developed to address resource conditions and visitor experience in NPS proposed wilderness areas. • Hiking, backpacking, hunting, canyoneering, vehicle exploring. • Enjoying Risk Taking Adventure; savoring the total sensory--sight, sound, and smell--experience of natural landscape • *Personal Benefits*: Improved outdoor knowledge, skills, and self-confidence; improved appreciation of nature's splendor; enhanced sense of personal freedom; greater sensitivity to/awareness of outdoor aesthetics, nature's art and its elegance. • *Household & Community Benefits*: Increased independence/autonomy. • *Environmental Benefits*: Increased awareness and protection of natural landscapes. The RMZ will be managed to produce recreation opportunities in the following essential settings (See Appendix J for setting descriptions): • *Physical Benefits*: Primitive to Roaded Natural, with regard to remoteness and naturalness and Primitive to Semi-Primitive Motorized, with regard to and recreation facilities. • *Social Benefits*: Primitive to Semi-Primitive Motorized regard to group size, evidence of use, and contacts. • *Administrative Benefits*: Primitive to Semi-Primitive Motorized, with regard to visitor services, management controls and Primitive to Rural, with regard to mechanized/motorized use, with regard to mechanized/motorized use (see Travel Management decisions regarding access for administrative uses).
B. LAND USE ALLOCATIONS	
LA-RR-01	The RMAs (both Special and Extensive), accompanying RMZs within each SRMA, and NPS SMAs will be identified as follows (See Appendix J for more information about RMAs): **Parashant SRMA/NPS SMA** • BLM SRMA: 839,234 acres • NPS SMA: 209,083 acres • Shivwits Frontier RMZ: 559,662 acres • Parashant Wildlands RMZ: 488,655 acres

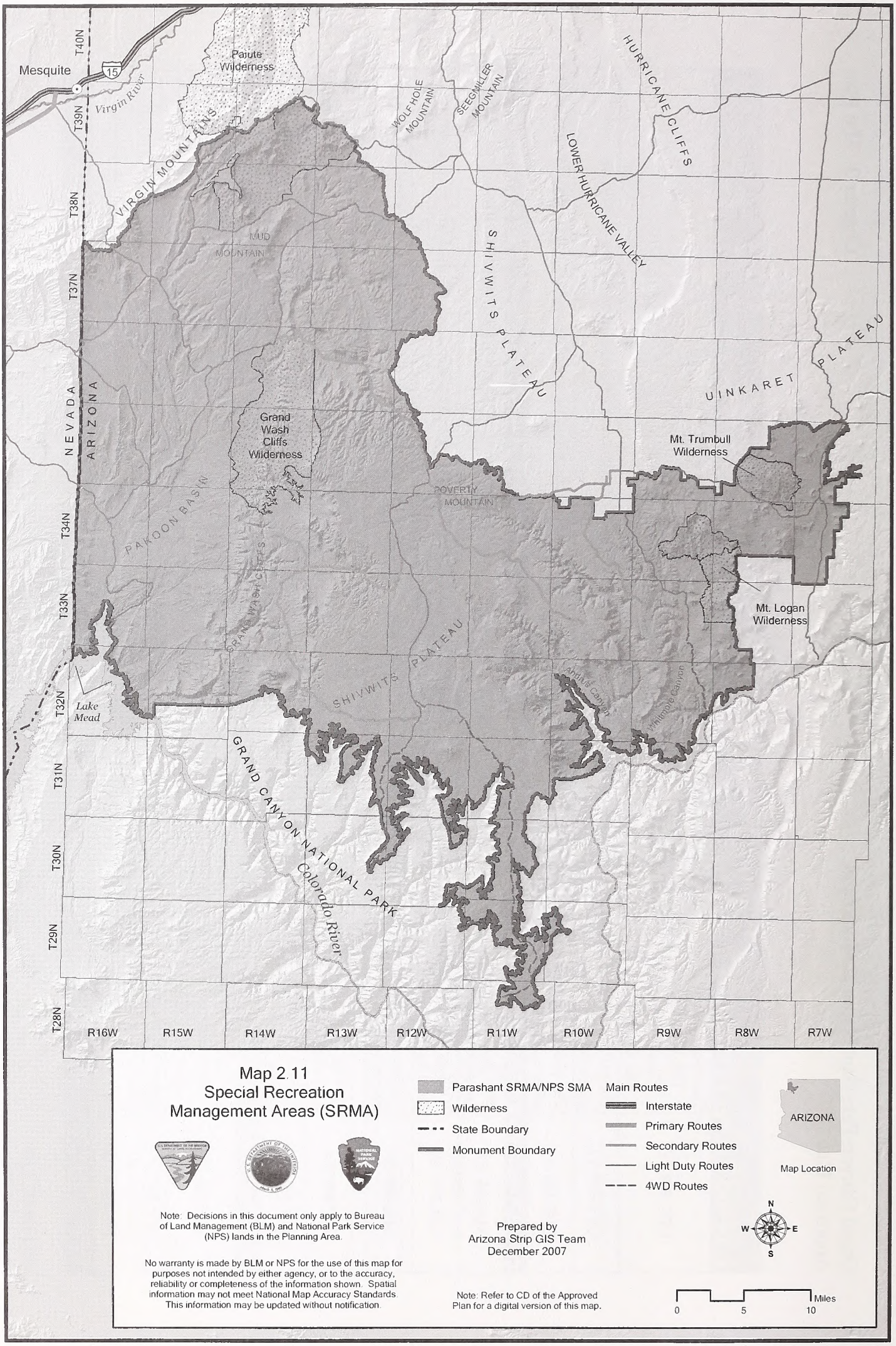
TABLE 2.14. RECREATION & VISITOR SERVICES/INTERPRETATION & ENVIRONMENTAL EDUCATION (RR)	
Decision #	**Decision Text**
C. MANAGEMENT ACTIONS	
Recreation Management Actions	
Resources	
MA-RR-01	To the extent practicable, the natural or "remote" settings in Specialized and Primitive TMAs will be restored and/or maintained using a combination of projects and natural processes as the need or opportunity arises.
MA-RR-02	Geocache sites will be relocated with help from local geocachers if, through monitoring, it were determined that important resources will be at risk of unacceptable change due to use of the site.
Signing and Recreation Facilities	
MA-RR-03	Major visitor facilities (visitor center or contact stations) will be collaborative efforts within nearby communities, with the exception of the Virgin River SRMA where a small contact facility can be considered.
MA-RR-04	Recreation facility development and maintenance will be limited in listed species and other sensitive habitats. (See Special Status Species and Vegetation Management decisions.)
MA-RR-05	• Within SRMAs, the levels and types of signing and recreation facility development will be guided by the individual RMZ objectives and the administrative and physical recreation settings components prescribed for each RMZ (see Appendix J, Physical Setting (Facilities) and Administrative Setting (Management Controls) for descriptions of settings components). • Where extensive recreation management areas (ERMAs) will be allocated, the main emphasis areas for any signing and/or recreation facility placement will be in the Rural and Backways TMAs. • Generally, signing and recreation facility development in the ERMAs will be the minimum necessary to provide for public safety, reduce user conflicts, and protect resources.
MA-RR-06	Sign material and design will be unobtrusive in order to blend with local landscape settings and retain the natural and/or historic integrity of the site.
Recreation Marketing Actions	
Promotion	
MA-RR-07	Sensitive areas where increased visitation can create unacceptable changes or impacts to natural or cultural resources will not be publicly promoted. Public information will be provided only for those cultural sites designated for public use.
Recreation Monitoring Actions	
Inventory and Monitoring	
MA-RR-08	A Limits of Acceptable Change (LAC) framework will be used to establish acceptable resource and social and managerial settings and conditions using appropriate indicators and standards.

TABLE 2.14. RECREATION & VISITOR SERVICES/INTERPRETATION & ENVIRONMENTAL EDUCATION (RR)	
Decision #	**Decision Text**
Recreation Administration Actions	
Visitor Limits and Regulations	
MA-RR-09	Recreational activities can be limited or restricted in special status species and other sensitive habitats (see Special Status Species and Vegetation Management decisions).
MA-RR-10	Visitor limits, supplemental rules, or restrictions will be based on LAC. Carrying capacities may be established as WHPs and activity plans are completed.
MA-RR-11	Management responses to unacceptable resource and/or social conditions will range from least restrictive methods (e.g., information and education) to most restrictive (e.g., visitor limits, supplemental rules, or restrictions). Where feasible, the least restrictive methods will be the first priority.
MA-RR-12	No person or persons should occupy one area on BLM-administered lands within the Monument for longer than 14 consecutive days in any 28-day period; however, extensions beyond the 14-day length of stay can be authorized for permitted uses on a case-by-case basis. Any site on public land within 30 air miles constitutes the same area for the purpose of this rule. Persons occupying a regular campsite within the Virgin River Canyon Recreation Area are exempt from this rule. To protect resources, for public safety, or for other administrative purposes, an authorized officer may, by posting notification, close a given site to occupancy.
MA-RR-13	Camping can be limited in listed species and other sensitive habitats (See Special Status Species and Vegetation Management decisions).
	Camping can be restricted or limited to protect cultural and/ or natural resources through campsite monitoring and LAC.
MA-RR-14	Vehicle camping along designated routes will be allowed only at existing sites where previous camping use is evident. However, existing sites that overlie or are causing significant impacts to sensitive resources will be closed and new sites can be made available in locations where resource impacts are lessened.
MA-RR-15	Non-motorized, dispersed camping will be allowed subject to Trail and Travel Management decisions.
MA-RR-16	Recreational shooting on BLM-administered lands will be allowed except where public health and safety is jeopardized and subject to state and local laws. (See Special Status Species and Public Health for specific decisions.) Voluntary use of non-lead ammunition will be encouraged. Recreational shooting will not be allowed on NPS-administered lands.
MA-RR-17	On BLM-administered lands, collection of antlers or other unregulated animal parts will be allowed. (See Travel Management for vehicular decisions, and Wildlife and Fish and Special Status Species for animal parts). On NPS-administered lands, no collection of antlers or animal parts will be allowed.
	Recreational collecting of Monument resources, such as rocks, mineral specimens, petrified wood, fossils, or plants will be prohibited. (See Travel Management for vehicular decisions and Vegetation Management for collection of plants.)
MA-RR-18	Collection of dead and down wood for campfires will be allowed, subject to fire restrictions.
MA-RR-19	Recreational stock use can be limited in listed species and other sensitive habitats or near cultural properties.

TABLE 2.14. RECREATION & VISITOR SERVICES/INTERPRETATION & ENVIRONMENTAL EDUCATION (RR)	
Decision #	**Decision Text**
MA-RR-20	Certified weed-free feed is required for all recreation stock use.
MA-RR-21	Where geocaches are allowed, they can remain so long as acceptable resource and social conditions will be maintained.
MA-RR-22	• Geocache sites are prohibited in archaeological sites, alcoves, caves, rock shelters, threatened and endangered species habitat, and raptor nesting sites, or where identified Monument objects will be at risk. • In-the-ground placement of geocaches will be prohibited in designated and NPS proposed wilderness areas.
	Permits and Fees
MA-RR-23	Visitor limits, regulations, or restrictions can be instituted and/or adjusted when monitoring of resource and social conditions indicate a trend toward unacceptable resource and social changes brought about by such use.
MA-RR-24	SRP application packages (application, operating plan, maps, etc.) will be considered for authorization on a case-by-case basis upon receipt of application (See 43 CFR 2930 for requirements).
MA-RR-25	No motorized speed events will be authorized in the Monument.
MA-RR-26	No competitive events will be authorized in wilderness or NPS proposed wilderness.
MA-RR-27	• Commercial, competitive, organized group/event, and special area permits can be authorized when such uses accomplish or are compatible with management objectives and other plan provisions. Commercial services in designated or proposed wilderness should meet guidelines for commercial activities within wilderness. • Recreation activities requiring use authorization can be limited in listed species and other sensitive habitats. (See Special Status Species and Vegetation Management decisions.)

INTERPRETATION & ENVIRONMENTAL EDUCATION	
A. DESIRED FUTURE CONDITIONS	
DFC-RR-16	The Monument's interpretation and environmental education program will be grounded in: • The Monument's natural and cultural resources • Themes related to the Monument's purpose, significance, and mission statements, and • The BLM's and NPS' missions and goals.
DFC-RR-17	The public will understand and appreciate the purposes and significance of the Monument and their resources for this and future generations.
DFC-RR-18	The public will understand the importance of natural and cultural resources in the Monument through interpretive, watchable wildlife, and other environmental education programs.
B. MANAGEMENT ACTIONS	
MA-RR-28	Outreach efforts will be established, such as field institutes or elder hostels, to focus on interpretive and environmental educational niches not previously addressed.
MA-RR-29	Visitors will be provided with environmental educational opportunities that are appropriate for each RMZ or for the ERMAs, allowing them to enjoy the variety of challenges that are presented when visiting these areas.
MA-RR-30	"Views," a program that provides multimedia based educational experience opportunities available through visitor centers and online, will be created.

Map 2.11 Special Recreation Management Areas



Map 2.11
Special Recreation Management Areas (SRMA)

Parashant SRMA/NPS SMA
Wilderness
State Boundary
Monument Boundary

Main Routes
Interstate
Primary Routes
Secondary Routes
Light Duty Routes
4WD Routes

ARIZONA
Map Location

N
W
E
S

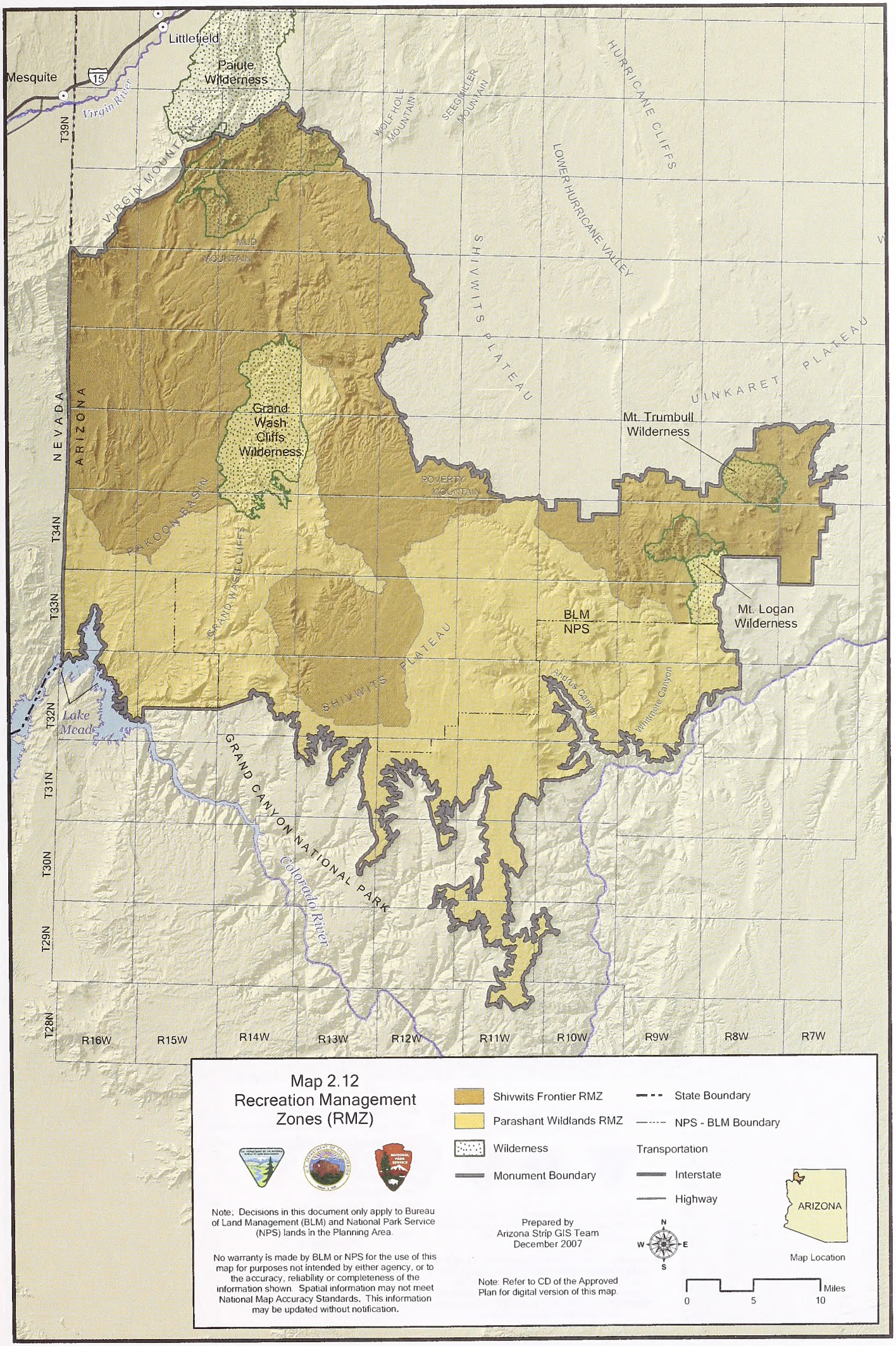
Miles
0
5
10

Note: Decisions in this document only apply to Bureau of Land Management (BLM) and National Park Service (NPS) lands in the Planning Area.

No warranty is made by BLM or NPS for the use of this map for purposes not intended by either agency, or to the accuracy, reliability or completeness of the information shown. Spatial information may not meet National Map Accuracy Standards. This information may be updated without notification.

Prepared by
Arizona Strip GIS Team
December 2007

Note: Refer to CD of the Approved Plan for a digital version of this map.



Map 2.12
Recreation Management Zones (RMZ)

Shivwits Frontier RMZ
Parashant Wildlands RMZ
Wilderness
Monument Boundary
State Boundary
NPS - BLM Boundary
Transportation
Interstate
Highway

Note: Decisions in this document only apply to Bureau of Land Management (BLM) and National Park Service (NPS) lands in the Planning Area.

No warranty is made by BLM or NPS for the use of this map for purposes not intended by either agency, or to the accuracy, reliability or completeness of the information shown. Spatial information may not meet National Map Accuracy Standards. This information may be updated without notification.

Prepared by
Arizona Strip GIS Team
December 2007

Note: Refer to CD of the Approved Plan for digital version of this map.

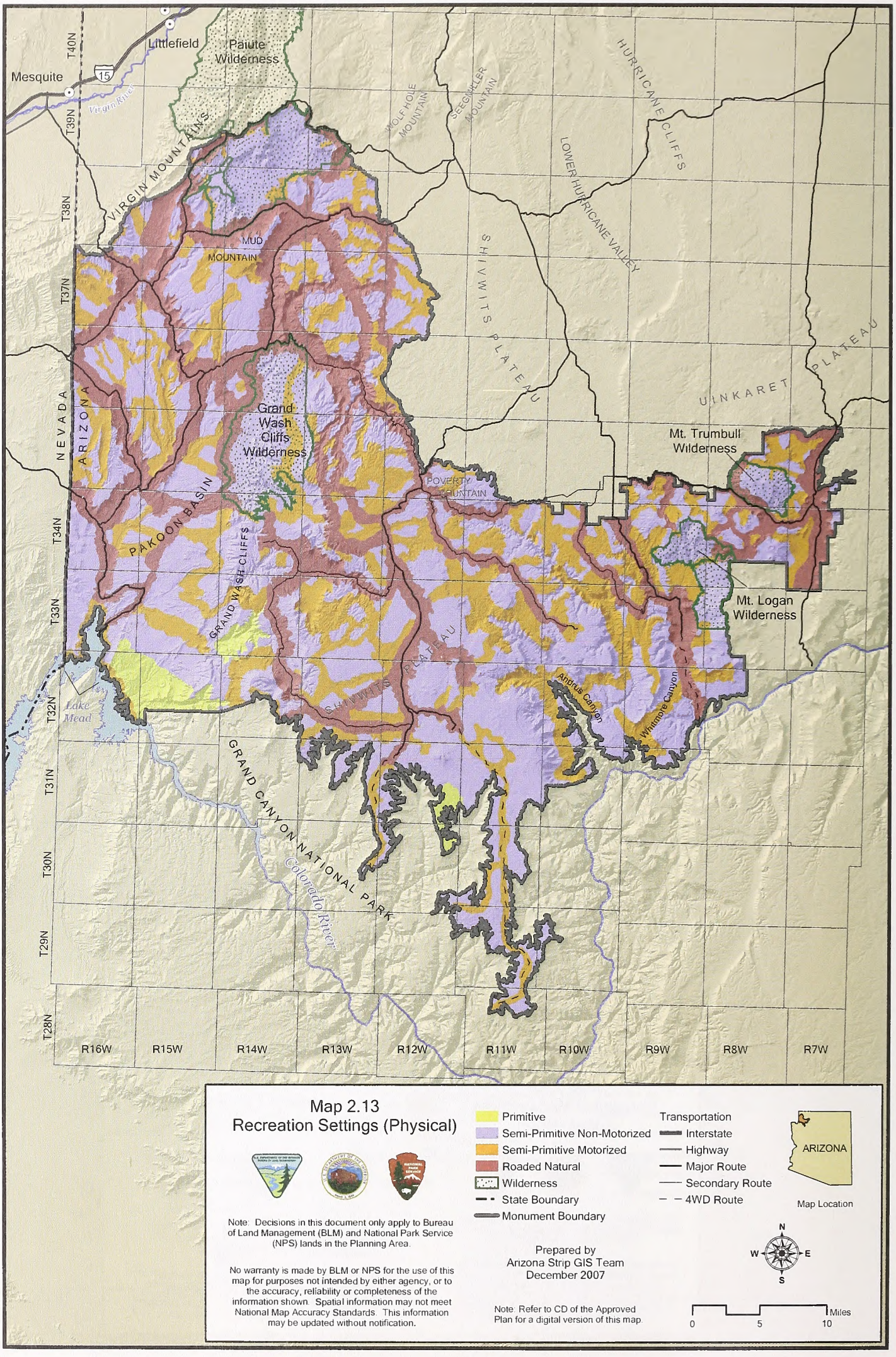
N
W
E
S

ARIZONA
Map Location

0 5 10 Miles

Map 2.12 Recreation Management Zones

Map 2.13 Recreation Settings (Physical)



Map 2.13
Recreation Settings (Physical)

Primitive
Semi-Primitive Non-Motorized
Semi-Primitive Motorized
Roaded Natural
Wilderness
State Boundary
Monument Boundary

Transportation
Interstate
Highway
Major Route
Secondary Route
4WD Route

ARIZONA
Map Location

Note: Decisions in this document only apply to Bureau of Land Management (BLM) and National Park Service (NPS) lands in the Planning Area.

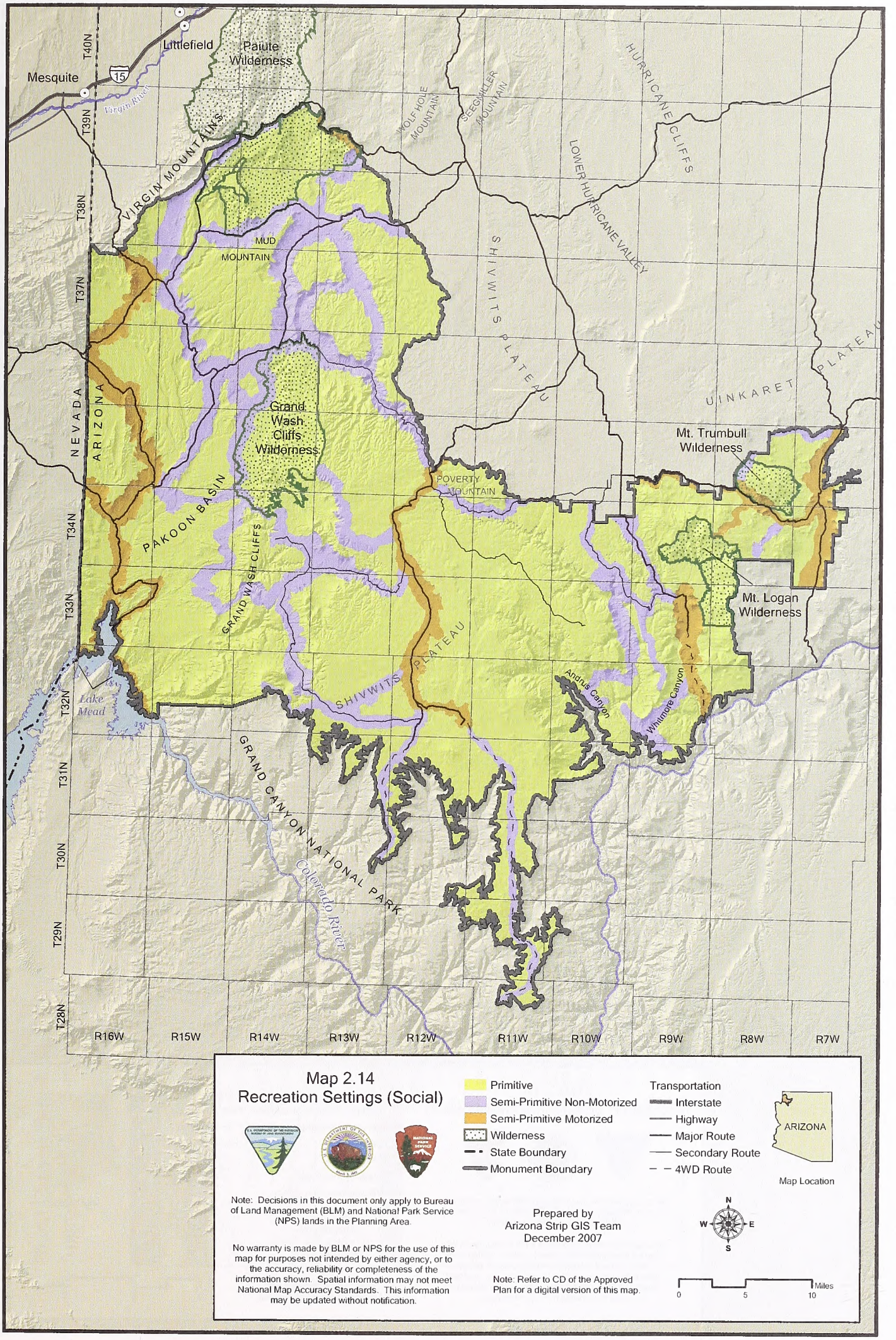
No warranty is made by BLM or NPS for the use of this map for purposes not intended by either agency, or to the accuracy, reliability or completeness of the information shown. Spatial information may not meet National Map Accuracy Standards. This information may be updated without notification.

Prepared by
Arizona Strip GIS Team
December 2007

Note: Refer to CD of the Approved Plan for a digital version of this map.

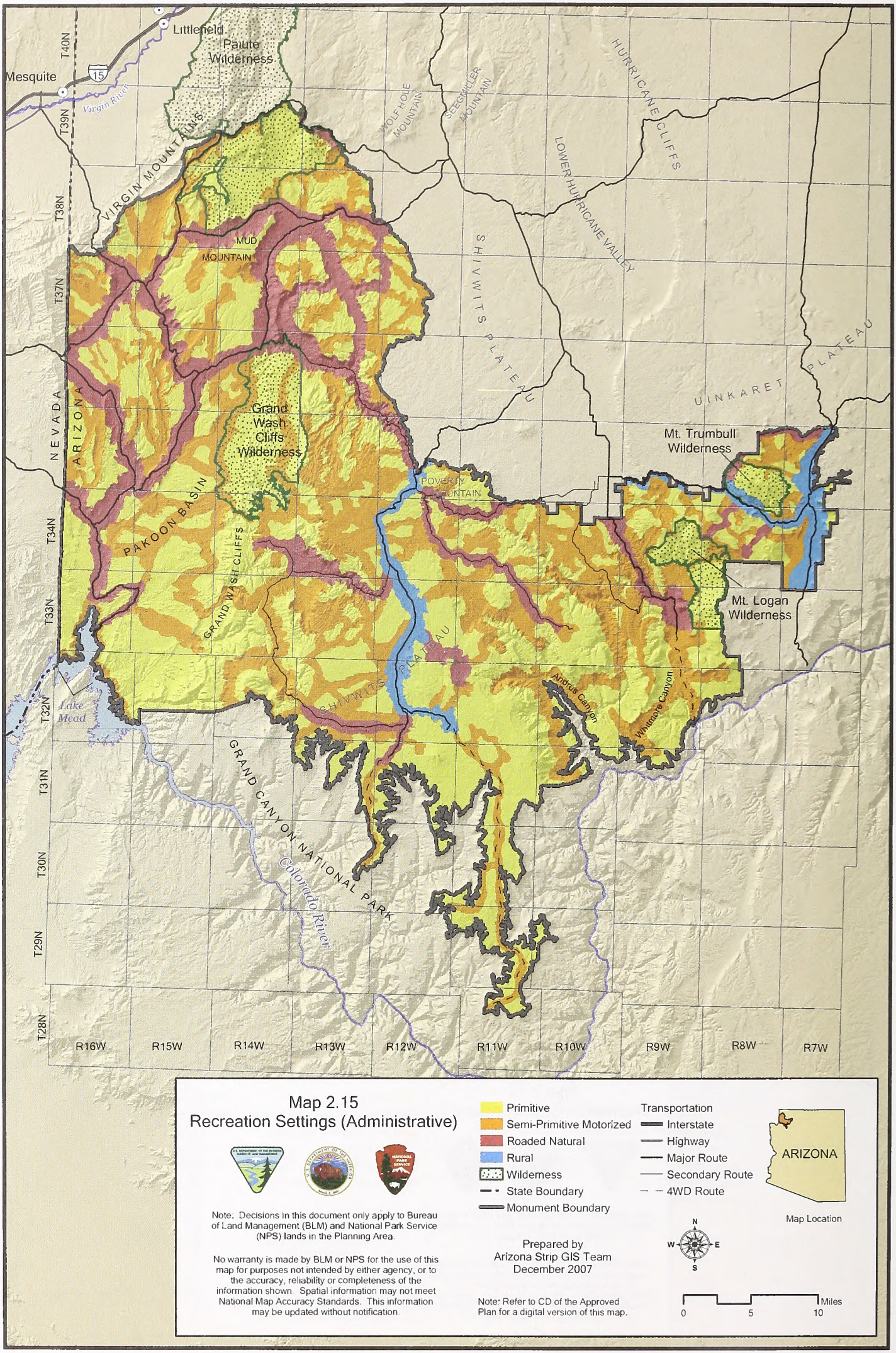
N
W
E
S

0 5 10 Miles



Map 2.14 Recreation Settings (Social)

Map 2.15 Recreation Settings (Administrative)



Map 2.15
Recreation Settings (Administrative)

Primitive
Semi-Primitive Motorized
Roaded Natural
Rural
Wilderness
State Boundary
Monument Boundary

Transportation
Interstate
Highway
Major Route
Secondary Route
4WD Route

ARIZONA

Map Location

Note: Decisions in this document only apply to Bureau of Land Management (BLM) and National Park Service (NPS) lands in the Planning Area.

No warranty is made by BLM or NPS for the use of this map for purposes not intended by either agency, or to the accuracy, reliability or completeness of the information shown. Spatial information may not meet National Map Accuracy Standards. This information may be updated without notification.

Prepared by
Arizona Strip GIS Team
December 2007

N
W
E
S

Note: Refer to CD of the Approved Plan for a digital version of this map.

0 5 10 Miles

TABLE 2.15. TRAVEL MANAGEMENT (TM)	
Decision #	**Decision Text**
A. DESIRED FUTURE CONDITIONS	
DFC-TM-01	The region's remoteness, scenic beauty, open spaces, and Monument objects will be maintained by careful travel management.
DFC-TM-02	A variety of existing motorized, mechanized, and non-motorized trail and travel opportunities will be sustained, where needed, to meet public and administrative needs.
DFC-TM-03	Compatible traditional, current, and future use of the land will be sustained by establishing a transportation system that contributes to protection of sensitive resource, promotes dispersed recreation, and minimizes user conflicts.
DFC-TM-04	Public use, resource management, regulatory needs, and Monument objects will be considered through travel management planning, incorporating consideration of the effects of, and interactions among all forms of travel including motorized, mechanized, non-motorized/non-mechanized, equestrian and other livestock, walking, mountain biking, and other travel modes.
Travel Management Areas	
DFC-TM-05	Backways TMA • Objectives: The Backways TMA will provide for a variety of motorized, non-motorized, and mechanical travel modes to serve existing and future recreational, traditional, casual, commercial, educational, and private needs, but not to the detriment or exclusion of the protection of resources. It will also supply the primary travel system that will provide public entry from communities to the more remote and semi-primitive TMAs. • Primary Travelers: The Backways TMA will serve the day-to-day needs of those with permits for the use of resources, such as grazing, and fuelwood, as well as private, state, and other land ownership needs and a variety of local, state, and Federal agency resource management needs. It will also serve the motorized and non-motorized needs of local, regional, national, and international visitors engaged in activities such as viewing scenery, visiting cultural resources and interpretive sites, exploring by vehicle, camping, picnicking, hunting; studying nature, and participating in organized events. It will also provide the best opportunities for day-use recreation activities related to motor touring. • Setting Characteristics: Settings will be maintained within the Backways TMA that typically provide entry to more remote areas, interpretive developments, and administrative facilities in mostly natural-appearing areas with motorized and mechanized use.
DFC-TM-06	Specialized TMA • Objectives: The Specialized TMA will provide for a variety of motorized, non-motorized, and mechanical travel modes to serve existing and future recreational, traditional, casual, commercial, and private needs in remote, rustic settings, but not to the detriment or exclusion of the protection of resources. It will also be characterized by low to moderate densities of improved roads and primitive roads that will provide public entry portals from Backways corridors to the more remote Primitive TMAs. • Primary Travelers: The Specialized TMA will serve the day-to-day needs of those with permits for the use of resources, such as grazing, and fuelwood, as well as private, state, and other land ownership needs and a variety of local, state, and Federal agency

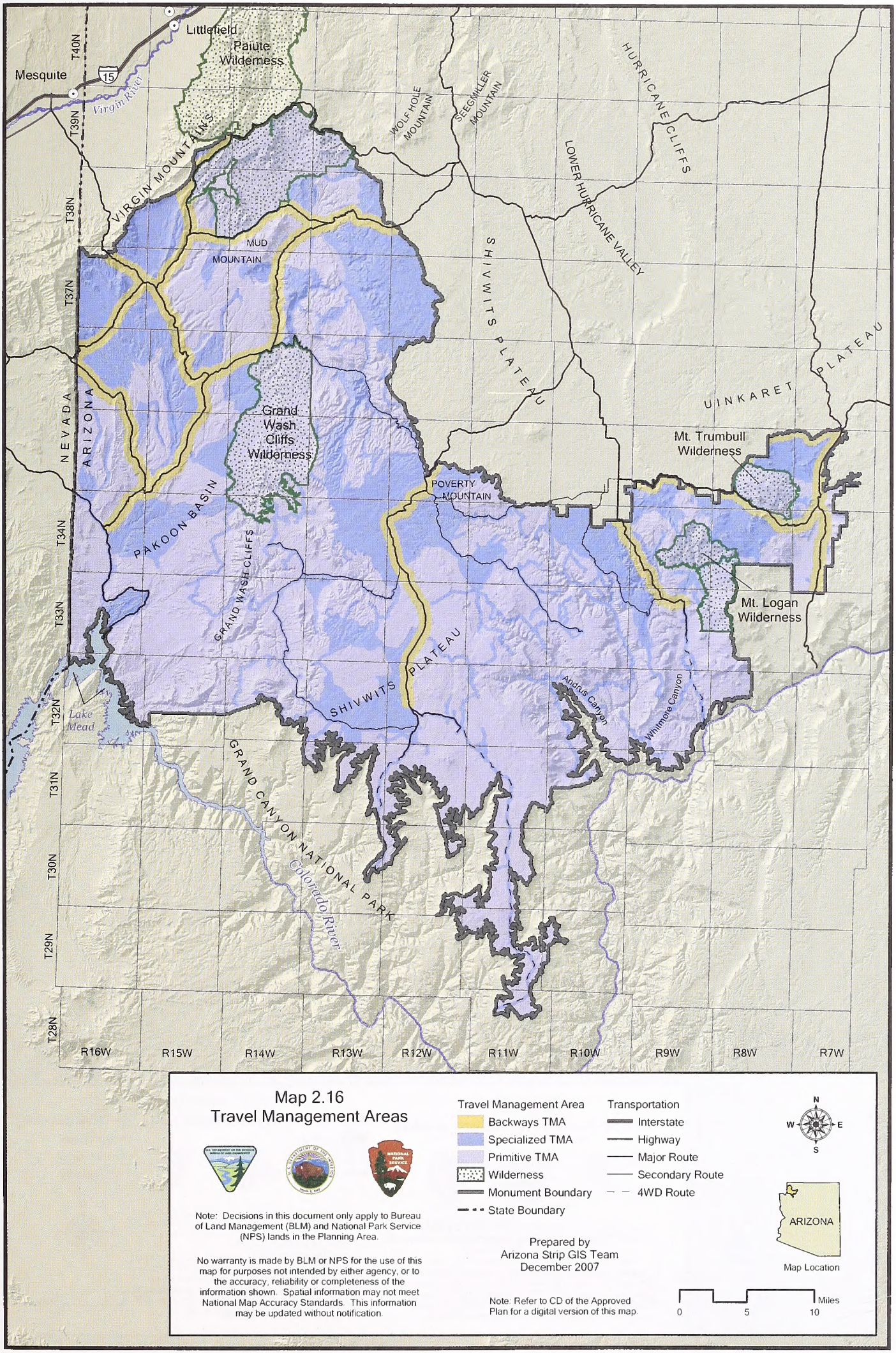
TABLE 2.15. TRAVEL MANAGEMENT (TM)	
Decision #	**Decision Text**
	resource management needs. It will also serve the motorized and non-motorized needs of primarily local, regional, and national visitors engaged in activities such as viewing scenery and cultural resources, exploring, camping, hiking, picnicking, hunting, gathering, and studying nature. • Setting Characteristics: Settings will be maintained within the Specialized TMA that typically provide for motorized and mechanized entry to the most remote areas on lower standard, primitive roads with few and widely scattered, rustic developments in mostly natural-appearing areas. Rudimentary facilities can be present when necessary to protect resources or educate visitors.
DFC-TM-07	Primitive TMA • Objectives: The Primitive TMA will provide for adequate, but limited motorized travel to serve existing and future traditional, casual, some commercial, private, and emergency needs and for non-motorized, non-mechanized travel to serve existing and future recreational needs in the most remote, rustic settings, for the enhancement and protection of important resource values. It will also range from large areas containing no routes to areas characterized by low densities of primitive roads that will provide entry to authorized management facilities for administrative users. • Primary Travelers: The Primitive TMA will serve the occasional needs of those with permits for the use of resources, such as grazing or research, as well as private, state, and other land ownership needs and a variety of local, state, and Federal agency resource management needs. It will also serve the non-motorized/non-mechanized needs of primarily local, regional, and national visitors engaged in activities such as viewing scenery and cultural resources, backcountry exploring, and hunting. • Setting Characteristics: Settings will be maintained within the Primitive TMA that provide for limited motorized entry for administrative users on a small number of primitive roads in the most remote areas. Few and widely scattered, rustic management facilities can be present in mostly natural-appearing areas where they will be necessary to protect and/or administer important resources. Remote settings, natural landscapes, solitude, and opportunities for primitive recreation will be minimally impacted by human activity.
B. LAND USE ALLOCATIONS	
	TMAs
LA-TM-01	TMAs will not be formally allocated or designated. Per Land Use Planning Handbook, H-1601-1, TMAs will be delineated as follows (see Appendix K and Map 2.16): • Backways 90,948 ac. 9% • Specialized 257,302 ac. 24% • Primitive 700,067 ac. 67%
	Off-Highway Vehicles
LA-TM-02	The following OHV area (polygons) designations will be subject to valid existing rights and administrative purposes (see Glossary). They are required land use plan decisions and cover area (polygon) designations. Specific route designations are implementation level decisions and can be found below in Section 2.b., Route Designations. Prior to the full implementation of OHV area designations, bureau policy will be followed regarding compliance with Section 106 of the NHPA (see Map 2.17).

TABLE 2.15. TRAVEL MANAGEMENT (TM)	
Decision #	**Decision Text**
	• On BLM and NPS land, 285,647 acres will be **closed** to motorized and mechanized vehicle use, which includes BLM designated wilderness and NPS proposed wilderness (see Map 2.17). • Motorized and mechanized vehicle use will be **limited** to designated roads on 762,669 acres on BLM and NPS land see Map 2.17).
C. MANAGEMENT ACTIONS	
Conditions of Use	
MA-TM-01	State of Arizona traffic law statutes will continue to apply to all motorized vehicle use on State, County, BLM, and NPS routes. Motor vehicle "registration requirement will not apply on lands under BLM jurisdiction to an all-terrain vehicle or an off-road recreational motor vehicle operating on a dirt road that is located in an unincorporated area of this state. For the purposes of this paragraph, "dirt road" means an unpaved or ungraveled road that is not maintained by this state or a city, town, or county of this state" (ARS 28-2153, D).
MA-TM-02	Motorized, mechanized, or non-motorized/non-mechanized use of routes that are designated as "limited" will be restricted to the specific users, seasons, or vehicle types as identified on a route-by-route evaluation and designation.
MA-TM-03	Motorized or mechanized use of administrative routes will be subject to the terms of an appropriate authorization instrument, such as ROW, permit, lease, maintenance agreement, or transportation plan that specifies the authorized administrative user, routes, destinations, potential frequencies, and acceptable intensities maintenance (See Appendix K).
MA-TM-04	Motorized or mechanized use of administrative routes in "closed" areas will be minimum necessary for the administration of the area or the exercise of the right or permitted use (see Glossary for definition of "administrative routes").
MA-TM-05	All vehicular travel in the Monument will be allowed only on roads designated as part of the transportation system. To protect Monument objects, no areas will be authorized for driving off these designated roads (e.g., cross-country) except for authorized administrative and emergency purposes.
MA-TM-06	In areas designated as "limited" in the Monument and along national trails, motorized use will keep within the designated road with reasonable use of the shoulder and immediate roadside, allowing for vehicle passage, emergency stopping, or parking, unless otherwise posted.
MA-TM-07	For roads that are designated open, management discretion to limit or close a route can be exercised where necessary through emergency closure to protect Monument objects.
MA-TM-08	Use of non-motorized, wheeled game carriers to retrieve kills will be allowed in all areas of the Monument except designated and NPS proposed wilderness.
MA-TM-09	On NPS-administered lands, per the 1979 Wilderness Proposal and the 1986 GMP, designated roads will be cherry-stemmed through proposed wilderness.
MA-TM-10	Roads designated for motorized/mechanized vehicle use by administrative users only, will allow only the minimum motorized or mechanized use necessary for the administration of the area or the exercise of the right or permitted use.

TABLE 2.15. TRAVEL MANAGEMENT (TM)	
Decision #	**Decision Text**
MA-TM-11	On roads adjacent to NPS proposed wilderness and within the wilderness boundary setback, visitors can park only on the road shoulder and immediate roadside, allowing for vehicle passage and emergency stopping, unless otherwise posted.
C. IMPLEMENTATION DECISIONS	
	Route Designation
IMPL-TM-01	Prior to the full implementation of route designations, the requirements of AZ IM 2006-043, Attachment 19, will be met regarding compliance with Section 106 of the NHPA.
IMPL-TM-02	Routes will be designated as follow (See Designated Transportation System on Map 2.18 and Route Evaluation Reports© or more detailed maps on the CD version that accompanies this Approved Plan: • **O**: **open** to all users for motorized/mechanized travel (various special mitigating measures designed to ensure Monument objects or other sensitive or important resources are protected may apply. Route Evaluation Report© designations = O or Mitigate Open [MO]) • **A**: **administrative use** only (open to administrative motorized uses and non-motorized public uses; public mechanized use limits may vary. Route Evaluation Report© designations = L or ML) (see Glossary for definition of administrative users). • **NM**: open to all users for **non-motorized** uses only (such as, horseback, foot or mechanized vehicles; mechanized use limits may vary) (Route Evaluation Report© designations = ML)
	BLM-administered lands: **O**: 1270 miles **A**: 176 miles **NM**: 28 miles
	NPS-administered lands **O**: 116 miles **A**: 417 miles **NM**: 9 miles
	Trail Systems Designation
IMPL-TM-03	**State Trails System:** Mt. Trumbull Trail will continue to be managed as an Arizona State Trail System component.
	State Trails System: Temple Trail (lower section) will continue to be managed as an Arizona State Trail System component.
	Route Closures
IMPL-TM-04	Routes will be closed as follows (See Designated Transportation System on Map 2.18 and Route Evaluation Reports© and Sub-region Maps and more detailed maps on the CD version of this Approved Plan): • **C**: **closed** to all motorized and mechanized use (with an objective of future natural and/or project rehabilitation. Route Evaluation Report© designations = C)

TABLE 2.15. TRAVEL MANAGEMENT (TM)	
Decision #	**Decision Text**
	C: 174 miles (BLM)
	C: 17 miles (NPS)
TRANSPORTATION FACILITIES	
A. DESIRED FUTURE CONDITIONS	
DFC-TM-08	The building of new roads, or altering or upgrading of existing roads, will be minimized to the greatest extent possible, except as needed to protect natural and cultural resources on public lands or support achieving other resource management objectives identified in this Approved Plan.
TMAs	
DFC-TM-09	Transportation facilities that will be available, suitable, and appropriate in the Monument will vary by TMA.
C. MANAGEMENT ACTIONS	
Management of Transportation Facilities	
MA-TM-12	Installations/structures (e.g., unobtrusive barriers, gates, signs) on or along routes will be allowed when they will be the minimum necessary to control unauthorized use and when consistent with TMA objectives.
MA-TM-13	Routes causing resource damage or with safety concerns can be rerouted and/or reclaimed. Minor rerouting of roads into areas where wilderness characteristics will be maintained can be considered when it is determined that: 1) it will resolve the concerns previously mentioned; 2) the road is an important travel link for public and administrative uses; 3) topography and engineering capabilities require consideration of such a reroute; and 4) public motorized and mechanized travel will remain on the road through the area.
	Rehabilitation of closed routes will only occur after completion of NEPA and Section 106.
MA-TM-14	Newly constructed temporary routes (i.e. routes intended to serve a short-term purpose only,) will be reclaimed after termination of the specific need.
MA-TM-15	No new roads will be allowed in BLM designated wilderness areas (95,109 acres) or on NPS proposed wilderness (190,479 acres).
MA-TM-16	Routes where motorized/mechanized vehicle use will be authorized for administrative use only may be designated as trails for non-motorized public use.
MA-TM-17	Trail construction (non-motorized and non-mechanized only) will occur to support protection and/or enhancement of Monument objects, RMZ objectives or to resolve issues of public safety, user conflicts, or resource protection.
MA-TM-18	• Existing material sites on BLM-administered lands will continue to be used for BLM, NPS, and county route maintenance needs. • New material sites will not be authorized on BLM and NPS-administered lands.
MA-TM-19	Route maintenance will occur within standard widths based on route type. Widening, passing lanes, realignments, or travel surface upgrades can occur if:

TABLE 2.15. TRAVEL MANAGEMENT (TM)	
Decision #	**Decision Text**
	• Protection and/or enhancement of Monument objects will be ensured. • They will be needed to achieve route standards. • They will be consistent with Travel Management Decisions and Appendix K: Appropriate Route Construction and Maintenance Standards by TMA. • They will be needed for public safety.
MA-TM-20	Existing routes will be closed and rehabilitated where public or administrative needs cease to exist or where there will be unacceptable impacts to resources/Monument objects.
MA-TM-21	New permanent routes will not be constructed adjacent to or within designated wilderness or NPS proposed wilderness.
MA-TM-22	On NPS-administered lands, travel corridors will be restricted to existing roads established according to the Lake Mead NRA GMP (1986).
MA-TM-23	On NPS-administered lands, roads will be maintained only within the existing disturbed travel surface. If needed for resource protection and/or visitor safety, minor modifications outside of existing corridors may occur with appropriate documentation and compliance.
MA-TM-24	New permanent motorized road construction on BLM-administered lands will be the minimum necessary to achieve Approved Plan provisions and to produce targeted recreation opportunities and benefits in RMZs if protection and/or enhancement of Monument objects will be ensured. However, new permanent roads will not be constructed in areas managed to maintain wilderness characteristics.
MA-TM-25	A travel management plan will be developed and maintained that supports resource protection and uses identified in this Approved Plan. (See Appendix K, TMAs and transportation plan contents.)
MA-TM-26	• Routes created by unauthorized use will be immediately obscured and rehabilitated. • Implementation plans will include outreach efforts to actively recruit service-oriented volunteers, organizations, and schools to assist with accomplishing appropriate implementation projects.
MA-TM-27	New roads on BLM-administered lands, once authorized and constructed, will become part of the designated transportation system; closed routes will be removed from the transportation system and plan.



Map 2.16
Travel Management Areas

Travel Management Area
- Backways TMA
- Specialized TMA
- Primitive TMA
- Wilderness
- Monument Boundary
- State Boundary

Transportation
- Interstate
- Highway
- Major Route
- Secondary Route
- 4WD Route

N W E S

ARIZONA

Map Location

Note: Decisions in this document only apply to Bureau of Land Management (BLM) and National Park Service (NPS) lands in the Planning Area.

No warranty is made by BLM or NPS for the use of this map for purposes not intended by either agency, or to the accuracy, reliability or completeness of the information shown. Spatial information may not meet National Map Accuracy Standards. This information may be updated without notification.

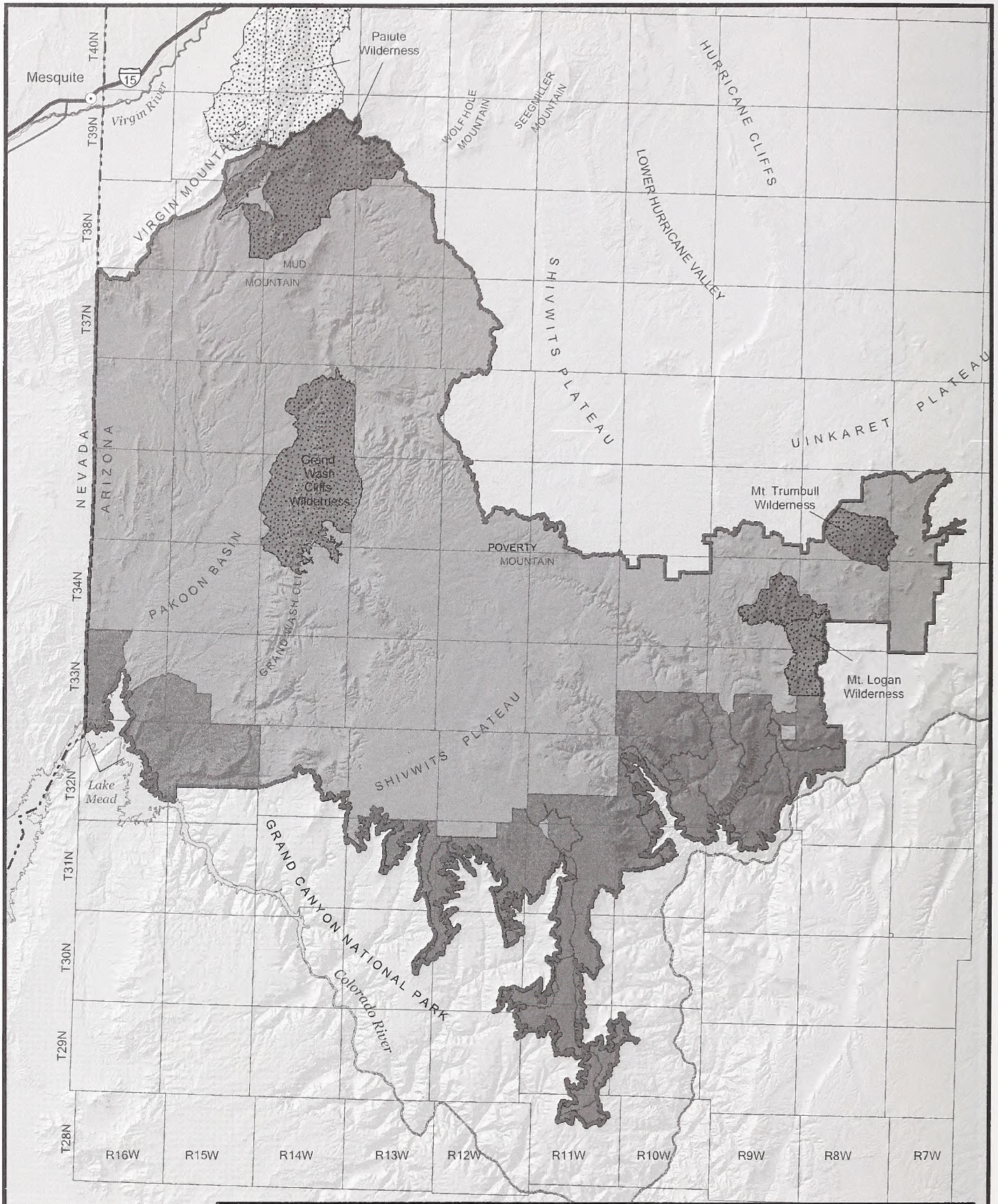
Prepared by
Arizona Strip GIS Team
December 2007

Note: Refer to CD of the Approved Plan for a digital version of this map.

0 5 10 Miles

Map 2.16 Travel Management Areas

Map 2.17 Off - Highway Vehicle (OHV) Designations



Map 2.17
Off - Highway Vehicle Designations

Limited to Designated Roads & Trails
Closed
Wilderness
Monument Boundary
State Boundary
Transportation
Interstate
Highway

Note: Decisions in this document only apply to Bureau of Land Management (BLM) and National Park Service (NPS) lands in the Planning Area.

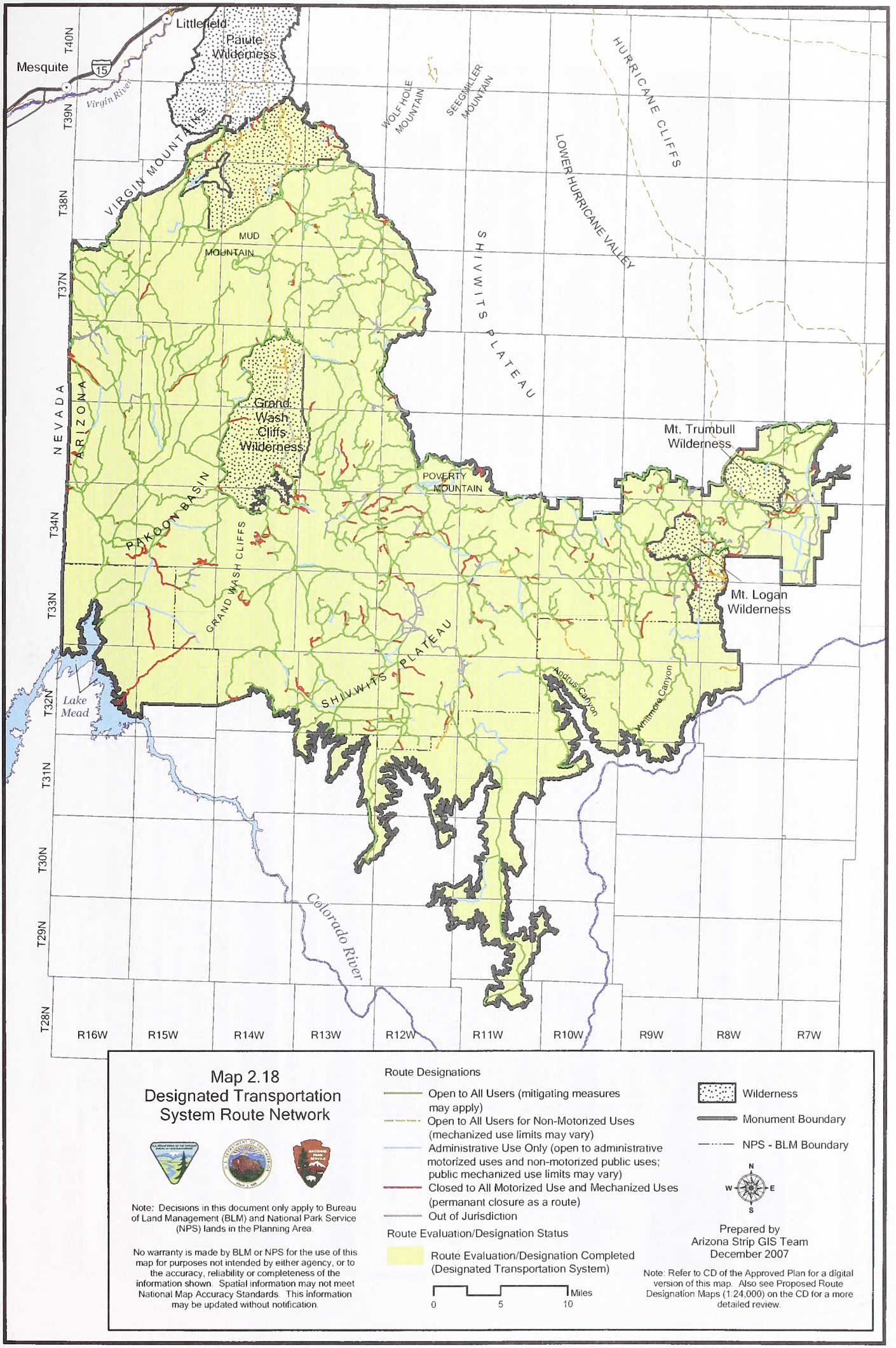
No warranty is made by BLM or NPS for the use of this map for purposes not intended by either agency, or to the accuracy, reliability or completeness of the information shown. Spatial information may not meet National Map Accuracy Standards. This information may be updated without notification.

Prepared by
Arizona Strip GIS Team
December 2007

Note: Refer to CD of the Approved Plan for digital version of this map.

N
W E
S

0 5 10 Miles



Map 2.18 Designated Transportation System Route Network

TABLE 2.16. SPECIAL DESIGNATIONS (AC, WM)	
Decision #	**Decision Text**
CONGRESSIONALLY DESIGNATED WILDERNESS (BLM) AND PROPOSED WILDERNESS (NPS) (WM)	
A. DESIRED FUTURE CONDITIONS	
	Goals
DFC-WM-01	The first and dominant goal will be to provide for the long-term protection and preservation of the areas' wilderness character under a principle of non-degradation. The areas' natural condition, opportunities for solitude, opportunities for primitive and unconfined types of recreation, and any ecological, geological, or other features of scientific, educational, scenic, or historical value present will be managed so that they remain unimpaired.
DFC-WM-02	The second goal will be to manage the wilderness areas for the use and enjoyment of visitors in a manner that leave the areas unimpaired for future use and enjoyment as wilderness. The wilderness resource will be a dominant factor in all management decisions where a choice must be made between preservation of wilderness character and visitor use.
DFC-WM-03	The third goal will be to manage the areas using the minimum tools, equipment, and/or structures necessary to accomplish the objective successfully, safely, and economically. The chosen tools, equipment, or structures will be the ones that least degrade wilderness values temporarily or permanently. Management will seek to preserve spontaneity of use and as much freedom from regulation as possible.
DFC-WM-04	The fourth goal will be to manage non-conforming but accepted uses permitted by the Wilderness Act and subsequent laws in a manner that will prevent unnecessary or undue degradation of the areas' wilderness character. Nonconforming uses are the exception rather than the rule; therefore, emphasis will be placed on maintaining wilderness character.
	Objectives
DFC-WM-05	The wilderness character of the four designated BLM wilderness areas (see Map 2.7) and seven NPS proposed wilderness will be protected and enhanced (see Map 2.9). Wilderness character is defined by (from Section 2(c), Wilderness Act): • Naturalness: An area that generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable. • Outstanding Opportunities for Solitude: Superior or excellent condition favorable for avoiding the sights, sounds, and evidence of other people in the area or for attaining a state of being alone or remote from others. A lonely or secluded place. • Outstanding Opportunities for Primitive and Unconfined Recreation: Superior or excellent situations favorable for non-motorized, non-mechanical (except as provided by law), and undeveloped types of recreation activities. Provides dispersed, undeveloped recreation, either through the diversity in the number of primitive and unconfined recreational activities possible in the area or the outstanding quality of a singular opportunity. • Supplemental Values: Ecological, geological, or other features of scientific, educational, scenic, or historical value.

TABLE 2.16. SPECIAL DESIGNATIONS (AC, WM)	
Decision #	**Decision Text**
DFC-WM-06	BLM wilderness areas and NPS proposed wilderness will be managed to be ecologically sustainable and resilient to natural and human-caused perturbations. (See Vegetation and Fire and Fuels Management decisions.) The NPS and BLM will strive to preserve or restore the natural quiet and natural sounds associated with the physical and biological resources of designated and proposed wilderness.
DFC-WM-07	Ecological DFCs will be adopted as objectives for wilderness areas. (See Vegetation and Fire and Fuels Management decisions.)
B. MANAGEMENT ACTIONS	
MA-WM-01	• Lands within BLM wilderness areas and NPS proposed wilderness can be restored where ecological integrity is outside the range of natural variability and where compatible with wilderness objectives. (See Vegetation Management decisions.) • The Minimum Requirement Decision Guide (Arthur Carhart National Wilderness Training Center, most recent version) will be used by the BLM and NPS in all decisions, giving greatest weight to accomplishing objectives via natural processes and non-mechanized/non-motorized means. • When fire will be managed in designated BLM wilderness areas or NPS proposed wilderness, MIST will be used. Fire management actions will be consistent with the wilderness management objectives and guidelines described in the BLM and Lake Mead Fire Management Plans.
MA-WM-02	NPS proposed wilderness will be as described and delineated in the Lake Mead NRA 1979 Wilderness Proposal.
MA-WM-03	Per NPS Management Policies and Wilderness Management Policies (Director's Order 41), proposed wilderness will continue to be managed as designated wilderness, allowing no actions that will diminish its wilderness characteristics until the legislative process of wilderness designation has been completed.
MA-WM-04	Subsurface mineral rights will be acquired from willing sellers on NPS-administered lands where NPS manages the surface estate.
Wilderness Management Plans	
MA-WM-05	Existing BLM WHPs will be evaluated and amended where necessary to conform to new management direction where appropriate, such as Monument proclamations, DFCs, or listed species recovery plans.
MA-WM-06	A WHP will be developed to guide the preservation, management, and use of NPS wilderness resources (NPS-WD-3).
Wilderness Restoration	
MA-WM-07	Prescribed fire and fire use can be used in areas classified as Wildland Fire Use within BLM wilderness areas and NPS proposed wilderness to achieve DFCs and wilderness area management objectives described in each agency's Fire Management Plan. Vegetation can also be treated manually.
MA-WM-08	Natural processes will be primarily relied on to restore areas of pre-existing human imprints in BLM wilderness and NPS proposed wilderness. Where proactive restoration of wilderness conditions is desirable, BLM and NPS will require conformance with BLM wilderness policy (BLM Manual 8560 and NPS Director's Order 41), and may require restoration plans to address restoration of pre-existing human impacts.

TABLE 2.16. SPECIAL DESIGNATIONS (AC, WM)	
Decision #	**Decision Text**
MA-WM-09	In conformance with BLM wilderness policy (BLM Manual 8560) for BLM wilderness areas and NPS policies (NPS Director's Order 41) for proposed wilderness, the best mix of manual, chemical, biological, or mechanical means, with fire and natural processes, will be determined in order to restore ecological functions and structure in wilderness.
AREAS OF CRITICAL ENVIRONMENTAL CONCERN (AC)	
A. SPECIAL DESIGNATION	
SD-AC-01	The Nampaweap ACEC will be revoked because Monument status provides additional protection of resources beyond ACEC designation.
SD-AC-02	The Witch Pool ACEC will be revoked because Monument status provides additional protection of resources beyond ACEC designation
SD-AC-03	The Pakoon ACEC for protection of the threatened desert tortoise and Mojave Desert Ecological Zone will be revoked because Monument status provides additional protection of resources beyond that afforded by ACEC designation.
RESOURCE CONSERVATION AREAS	
A. LAND USE ALLOCATION	
LA-RC-01	The Mt. Trumbull RCA (88,654 acres) designation will be revoked because the Monument provides adequate protection of resources. A portion of this RCA falls within the Arizona Strip FO and will also be revoked (13,651 acres).
LA-RC-02	The Parashant RCA (39,854 acres) designation will be revoked because the Monument provides adequate protection of resources.

TABLE 2.17. PUBLIC HEALTH AND SAFETY (HM)	
Decision #	**Decision Text**
A. DESIRED FUTURE CONDITIONS	
DFC-HM-01	All hazardous or potentially hazardous sites and situations, including hazardous materials, hazardous or solid wastes, abandoned mine sites, abandoned well sites, and other potential hazards on public lands, will be mitigated or eliminated.
DFC-HM-02	The potential for intentional or accidental releases of hazardous materials or wastes and solid waste onto BLM and NPS-administered lands will be minimized or eliminated.
B. MANAGEMENT ACTIONS	
MA-HM-01	Areas known to have hazardous materials, hazardous wastes, or solid wastes, including abandoned mine lands, will be remediated, restored, or corrected.
MA-HM-02	Responsible parties will be actively sought to reimburse hazardous materials cleanup costs.
MA-HM-03	On BLM-administered lands, recreational shooting will be allowed within the context of the law. Recreational shooting will not be authorized on NPS-administered lands.
MA-HM-04	Public access to abandoned mine and well sites will be controlled by providing warning signage and barriers, as appropriate.
MA-HM-05	As funding allows, abandoned mines will be identified and prioritized for remediation, restoration, or corrections as follows: • Those that are public safety hazards. • Those that may contain high levels of heavy metals in waste rock or tailings. • Those that may be degrading water quality.

TABLE 2.18. SCIENTIFIC RESEARCH (SR)	
Decision #	**Decision Text**
A. DESIRED FUTURE CONDITIONS	
DFC-SR-01	Approved scientific research will contribute to management of natural and cultural resources and achieving DFCs.
B. MANAGEMENT ACTIONS	
MA-SR-01	Permits will be required for approved scientific research to insure compatibility and reporting of results.
MA-SR-02	The collection of any objects in the Monument will not be authorized except by permit for scientific research or use.

ADMINISTRATIVE ACTIONS

Administrative actions are not management decisions at either the land use plan level or implementation level. Administrative actions do not require NEPA analysis or a written decision by a responsible official in order to be accomplished. Instead, administrative actions (and standard operating procedures) are day-to-day activities conducted by the BLM and NPS, often required by FLPMA or the Organic Act, which outline the objectives, basic management policy, and program direction. Examples of administrative actions include mapping, surveying, inventorying, monitoring, and collecting information needed such as research and studies. Some specific administrative actions associated with the management of the Monument are listed below. This is, however, not a complete list of all standard operating procedures required by law or policy that the BLM and NPS will use in administering the resources and uses of this Monument.

Geology and Paleontology

- Inventories for paleontological resources will continue.
- A sensitivity map for paleontological resources will be developed and screening for all projects against potential for the project to impact vertebrate fossils or noteworthy occurrences of invertebrate or plant fossils will be required.

Cave and Karst Resources

- Inventories for cave and karst resources will continue.

Vegetation Management (All Ecological Zones)

- Desired Plant Community Objectives
  - Ecological site inventories will be completed to determine site potentials and ecological conditions.
  - Vegetation treatments and uses will be monitored as part of an adaptive management process. When new information from monitoring or other studies becomes available, practices and guidelines will be modified to incorporate best science available.

Vegetation Management (Ponderosa Pine Ecological Zone)

- The BLM and NPS will monitor fire effects and ecological conditions within treated areas.
- Treatments will continue to be monitored to provide short- and long-term information on the effects of ponderosa pine restoration treatments on the plant and animal communities affected by the treatments.

Fish and Wildlife (General)

- Benefits for dollars spent on managing and improving wildlife habitat on public lands will be maximized by continuing and expanding cooperative partnerships with AGFD, USFWS, and other interested groups.
- On NPS-administered lands, wildlife decisions and specific actions from this Approved Plan will be guided by a cooperative planning process focusing on ecosystem management that perpetuates a natural distribution of native wildlife in a mosaic of their associated habitats within a normal range of variability. Plans will be developed cooperatively involving AGFD, BLM, USFWS, and interested stakeholders. Plans will integrate BLM Habitat Management Plans.

Fish and Wildlife (Kaibab Squirrel)

- Kaibab squirrel populations will be monitored in cooperation with AGFD. Standardized surveys will be used to inventory populations and evaluate existing habitat.

Fish and Wildlife (Migratory Birds)

- Migratory bird populations will be monitored in cooperation with AGFD.
- Significant waterfowl habitat sites will be inventoried.
- Standardized surveys will be used to inventory breeding bird populations and evaluate existing habitat.

Fish and Wildlife (Carnivores)

- Carnivore and furbearer habitats will be monitored to ensure a healthy and diverse predator component throughout the Monument.

Special Status Species (All Special Status Species)

- Public awareness of special status species will be increased through signs, educational media, and other outreach efforts to promote conservation of the species.
- Guidance criteria for assessing impacts to listed species from livestock grazing actions will be used as appropriate.
- To the extent practicable, inventory and monitoring of special status species will be conducted in accordance with accepted survey protocols.

Status Species (Special Status Plants)

- The BLM and NPS will continue to inventory and map known locations and potential habitat for special status plant populations to ensure protection of these populations and facilitate management.
- The BLM and NPS will continue appropriate monitoring of all special status plant species within the Monument.

- Public conservation education programs will be implemented to inform publics of the value of conserving special status plant habitats and the rules and policies governing their protection.

Special Status Species (All Special Status Raptors)

- The BLM and NPS will continue to survey and/or monitor potential habitat for special status raptors within the Monument.
- The BLM and NPS will continue to maintain a database of raptor observations.
- The BLM and NPS will continue to identify roost locations.
- A program of public conservation education and planning directed towards preservation of special status raptor habitats will be carried out.

Special Status Species (Peregrine Falcon)

- The BLM and NPS will cooperate and assist with post-delisting monitoring efforts for peregrine falcon within the Monument.

Special Status Species (Riparian-Dependent Special Status Birds: Southwestern Willow Flycatcher)

- Identification and mapping of suitable and potential habitat areas for SW flycatchers will continue.
- Habitat conditions in suitable and potential SW flycatcher habitat will continue to be monitored at least every third year to determine best management of riparian areas.
- Appropriate monitoring of all riparian areas within the Monument, including greenline transects, riparian functionality assessments, etc., will continue,
- SW flycatcher occurrence surveys will continue at least every other year at all suitable habitat locations.
- Nest monitoring will continue to determine nesting success, parasitism rates, and predation rates.
- Baseline data on cowbird parasitism will be collected.
- Employees and public users will be educated about SW flycatchers.
- The BLM will continue to maintain a database of SW flycatcher observations.

Special Status Species (Riparian-Dependent Special Status Birds: Yellow-billed Cuckoo)

- The BLM and NPS will continue to maintain updated maps of yellow-billed cuckoo habitat in the Monument.
- Support and participation for yellow-billed cuckoo survey and monitoring efforts on lands within the Monument will continue.
- Habitat conditions in yellow-billed cuckoo habitat will continue to be monitored in order to be able to determine how best to manage these riparian areas to protect this and other riparian dependent species.
- The BLM will continue to maintain a database of yellow-billed cuckoo observations.

Cultural Resources (Archaeological and Historic Resources)

- Non-destructive research proposals such as inventory, intensive site mapping, Historic American Building Survey/Historic American Engineering Record documentation of historic structures, cultural landscapes, and other significant historic properties, and scaled rock art recording will be pursued through interagency cooperation, grants, contracts, and other funding sources.
- The Arizona Site Steward Program, service groups, and other volunteers will be supported in order to monitor resource conditions, assist in resource protection, assist in project work, aid in effective land management, and to serve as advocates and stewards of BLM and NPS missions to protect and conserve cultural resources.
- Proactive research, protection, and inventories with universities, avocational and service groups, site stewards, tribes, and communities will be used to gain a better understanding of cultural resources for present and future management and protection.
- Properties eligible for listing on the National Register of Historic Places (NRHP) will be nominated.
- Cooperative management agreements will be developed with the neighboring Federal agencies, local and regional American Indian tribes and communities, institutions of higher learning, and/or other agencies or groups to improve the efficiency and quality of site management.
- Scientific study to gain knowledge on the full array of cultural resources in the Monument will be allowed in order to fulfill regional research objectives and to fill regional data gaps identified in Altschul and Fairley (1989), when possible. Such studies can include ethnographic and oral histories, historic and landscape studies, archaeological studies, and ethnobotanical and environmental studies.
- Databases, maps, site, and inventory records will be maintained to current professional standards.
- Databases and finder guides that help to locate, use, and organize archives and museum collections will be established.
- Priority geographic and historic areas for new field inventory will include riparian first terrace locations, woodlands, Shivwits Plateau, and wilderness areas.
- Geographic and archaeological scientific inventories will be continued based on imminent threats from natural or human-caused deterioration, potential conflict with other resource uses, and the probability for unrecorded significant resources.
- Archives and museum collections will be located, inventoried, and managed to ensure accessibility and use for research, documentation, and public interpretation.
- All implementation actions will be contingent upon the outcome of Sec 106 consultation with the Arizona State Historic Preservation Office (SHPO) and will not proceed until that process was completed.

Cultural Resources (Resources of Importance to American Indians)

- Tribes and individual members of tribes with cultural and historic ties to the Monument will be consulted, according to the provisions specified in Native American Grave Protection and Repatriation Act, Archaeological Resources Protection Act, NHPA, and pertinent Executive Orders.
- Traditional Cultural Properties will be identified and associated socio-cultural values will be documented.
- Mutually acceptable methods of protecting and preserving areas of sacred and traditional importance will be adopted.

Soundscapes

- Under any Section 4(f), Air Tour Management planning for adjacent national park system units or other consultations with FAA/U.S. Department of Transportation, the NPS will recommend the protection and/or restoration of natural quiet within and above Monument lands.
- The NPS will continue to evaluate how, when, and where motorized equipment is used on NPS-administered lands. Where such use is necessary and appropriate, the least impacting equipment, vehicles, and transportation systems will be used.
- The NPS will develop baseline inventories of natural ambient and non-natural sound levels and an associated monitoring program for NPS-administered lands.

Lands and Realty

- The BLM will attempt to locate the potentially responsible party to remove/clean up any unauthorized use, restore/rehabilitate the public lands back to their original condition, and pay the administrative costs incurred by the BLM to investigate the unauthorized use along with applicable rental/additional fees as provided by BLM Manual 9232 and H-9232-1. Where the potentially responsible party is not found, the BLM will conduct the removal/cleanup as funding allows. However, if the potentially responsible party were later identified, the BLM will seek reimbursement of the costs incurred.
- Existing BLM withdrawals will continue for as long as needed or as statutorily/legislatively established/mandated, which include wilderness areas (95,242 109acres) and power site reservation, reclamation, public water reserve (approximately 78,415411 acres), administrative site, and other miscellaneous withdrawals (approximately 1632 acres).
- Land ownership adjustments will not be considered on withdrawn land unless or until the withdrawal has been modified or lifted. Lands that become un-encumbered through the withdrawal review process will then be subject to and managed in accordance with planning guidance and objectives.
- There are a number of favorable places throughout the Monument that are commonly known and consistently used for aircraft landing and departure activities that, through such casual use, have evolved into backcountry airstrips (the definition contained in

Section 345 of Public Law 106-914, the Interior and Related Agencies Appropriation Act of 2001). In accordance with that law, any closure of an aircraft landing strip contemplated in the future, will require full public notice, consultation with local and State government officials and the FAA.

- Existing land use authorizations (ROWs, permits, leases, etc.) will be administered within the Monument, wilderness, and areas managed to maintain wilderness characteristics in accordance with the terms and conditions of the authorizations.
- Floodplain occupancy and development will be avoided and base floodplain (100-year) will be retained or protected.
- Airstrips authorized by a public airport lease or reserved for use by the U.S. on BLM-administered lands (Pakoon, Imlay, and Whitmore-Bar Ten) will continue to be managed.
- No public airstrips will be authorized on NPS-administered lands.

Recreation and Visitor Services

- Recreation Management Actions: Signing and Recreation Facilities
  - All recreation facilities and signs will be made consistent with the Americans with Disabilities Act of 1973, Rehabilitation Act of 1973, and the Architectural Barriers Act of 1968.
  - A sign plan for the Monument that addresses present and future needs involving road information, interpretation, and public safety will be written. The sign plans will be coordinated with the development of maps and access guides for the Arizona Strip FO.
  - Implementation plans will include outreach efforts to actively recruit service-oriented volunteers, organizations, and schools to assist with accomplishing appropriate implementation projects.
  - The BLM and NPS sign standards will be incorporated to create a joint identity and sign design for the Monument.

- Recreation Marketing Actions, Visitor Services and Information
  - Accurate information regarding recreation opportunities, interpretation of natural and human history, and specific rules and regulations pertaining to their use of BLM/NPS-administered lands will be provided to visitors.
    - The Interagency Information Center and partnerships with cooperating associations will continue to be used to distribute resource information to the public.
    - The Interagency Information e BLM Arizona Strip Visitor Center and outlying visitor contact facilities (not necessarily BLM) will sell or provide free, maps, resource brochures, and safety information so that visitors will have a safe and enjoyable experience. A web site will continue to be maintained for online inquiries.
  - The comprehensive interpretive plan developed in the Interpretation and Environmental Education section will also include:

- Travel, orientation, and safety information, as appropriate to each TMA.
- A variety of driving tour route guides will be developed to enhance motorized sightseeing.

- Recreation Administration Actions, Permits and Fees
  - Public input and coordination and consultation with affected Federal and State agencies will be sought prior to instituting any new permit or fee programs.
  - Annual training will be provided to SRP holders concerning appropriate use ethics, such as *Leave No Trace* and *Tread Lightly*.
  - The BLM and NPS permitting processes will be consolidated to provide the public with a simplified procedure for obtaining permits.

Interpretation and Environmental Education

- Arizona Strip District and Monument staff will seek partnerships with other state and Federal agencies, educational institutions, and other organizations to enrich interpretation and environmental educational opportunities.
- Outreach programs will be developed through organizations, schools, and partnerships to build emotional, intellectual, and recreational ties with the area and its cultural and natural heritage.
- Education and outreach programs like *Tread Lightly* and *Leave No Trace* will continue to be supported.
- Monument and Arizona Strip district staff will remain informed of changing visitor demographics to better tailor interpretive media to visitor needs and desires.
- Comprehensive interpretive plans (CIPs) will be completed, creating a long-range vision and basis for decision-making related to interpretation and education for the Monument. The CIPs will address:
  - Interpretive goals, objectives, and associated management actions necessary for interpreting themes to target audiences.
  - Interpretive goals, objectives, and associated management actions necessary for meeting the needs of the public as identified in the Recreation Marketing Actions section of various RMZs within the SRMAs.
  - Interpretive publications that will need to be developed for public use.
  - Outreach environmental education programs (interactive computer, workshop, and classroom) that will need to be developed to enhance knowledge of natural and cultural resources and promote stewardship.
  - Partnerships with other state, national parks, educational institutions, and other organizations to enrich interpretation and environmental education opportunities that will need to be developed.

Travel Management

- A route inventory database will be maintained using standard collection and information storage methods.
- The areas will be monitored to detect unauthorized route creation.

Transportation Facilities

- Maps and portal signing will be developed and installed to inform public land users of the preliminary route network.
- The BLM/NPS will actively recruit service-oriented volunteers, organizations, and schools to assist with accomplishing appropriate implementation projects

Public Health and Safety

- The Arizona Strip District Hazardous Material Response Plan will continue to be followed on BLM-administered lands.
- Hazardous sites or locations that affect or can affect public health or safety will be inventoried and monitored.
- All authorized or permitted activities will adhere to hazardous materials regulations for storage, use, and disposal.

ENVIRONMENTAL ANALYSIS AND INTERRELATIONSHIPS

REQUIREMENTS FOR FURTHER ENVIRONMENTAL ANALYSIS

The land use plan decisions in this Approved Plan will be implemented after signing of the Records of Decision (RODs) and do not require any further environmental analysis or documentation. Land use plan decisions are the basis for every on-the-ground action the BLM and NPS undertake. Land use plans are guiding documents that present land use plan decisions as well as implementation or activity level decisions. They address resources and values to be protected, uses, and public health issues within the Monument and must be consistent with resource management objectives, activities of the area, and environmental laws and regulations.

Implementation decisions in this Approved Plan may also be implemented upon signing of the RODs. However, whenever implementation or activity level plans (e.g., wilderness plans, HMPs, etc.) are prepared, additional environmental analysis and documentation will be required. Environmental analysis of site-specific projects at the watershed, project, or activity level may analyze specific proposed actions or management.

Site-specific environmental analyses and documentation (including the use of categorical exclusions and determinations of NEPA adequacy, where appropriate) may be prepared for one or more individual projects, in accordance with management objectives, DFCs, and decisions established in this Approved Plan. In addition, the BLM and NPS will ensure that the

environmental review process includes evaluation of all critical elements. Cultural resources and threatened and endangered species will be identified and considered in accordance with Section 106 of the NHPA and Section 7 of the ESA, respectively.

Interdisciplinary impact analysis will be based on this and other applicable environmental documents. The BLM and/or NPS may be required to draft a new EA or EIS, or supplement to an existing EIS, if the analysis prepared for site-specific projects finds potential for significant impacts not already described in an existing EA or EIS.

Upon providing public notice of a decision, supporting environmental documentation will be sent to all affected parties and made available to others upon request. Decisions to implement site-specific projects are subject to administrative review at the time such decisions are made.

INTERRELATIONSHIPS

The BLM and NPS coordinate their management activities with the actions of related Federal and state agencies responsible for land or resource management. This Approved Plan includes participation by the BLM in Utah and Nevada; Kaibab National Forest (North Ranger District); Grand Canyon National Park; Pipe Spring National Monument; Glen Canyon NRA; USFWS; Federal Highway Administration; Kaibab Paiute Tribe; counties in Arizona and Utah; communities in Arizona, Utah, and Nevada; and state agencies including AGFD, Arizona Department of Transportation, and Arizona State Land Department.

As part of the planning process, the BLM and NPS have requested formal consultation with USFWS on potential impacts to federally listed, proposed, and candidate species and designated or proposed critical habitat. In April 2003, the BLM, NPS, and USFWS finalized a Consultation Agreement to establish an effective and cooperative ESA Section 7 consultation process. The Agreement defines the process, products, actions, schedule, and expectations of the BLM, NPS, and USFWS regarding project consultation. The Agreement also considers effects to, and management for, candidate species. A biological assessment (BA) was prepared and submitted to determine the effect of the Approved Plan on all relevant listed, proposed, and candidate species, and associated critical habitat. All anticipated environmental effects, conservation actions, mitigation, and monitoring were disclosed in the BA, including analysis of all direct, indirect, and cumulative effects of the Approved Plan as analyzed in the Proposed Plan/FEIS. The biological opinion for this Approved Plan was completed on November 7, 2007 and resulted in a no jeopardy opinion from USFWS. The Incidental Take, Reasonable and Prudent Measures with Terms and Conditions, and Conservation Recommendations from this biological opinion can be found in Appendix B in this Approved Plan.

The Approved Plan was also provided to the Arizona SHPO to comply with Section 106 of the NHPA. The BLM and NPS actions also comply with other Federal environmental legislation and land use plans, such as the Clean Air Act and Clean Water Act, and with applicable state and

local government regulations, such as the Sikes Act (16 U.S. Code. 670 et seq., as amended). The Sikes Act authorizes the Department of the Interior, in cooperation with state agencies responsible for administering fish and game laws, to plan, develop, maintain, and coordinate programs for conserving and rehabilitating wildlife, fish, and game on public lands within its jurisdiction. The plans must conform to overall land use and management plans for the lands involved. The plans may include habitat improvement projects and related activities, and adequate protection for species of fish, wildlife, and plants considered endangered or threatened. The BLM must also coordinate with the appropriate state agencies in managing state-listed plant and animal species when the State has formally made such designations.

The BLM and AGFD work cooperatively to manage resources within the Monument. The BLM is responsible for managing wildlife habitat on BLM lands and AGFD, through the authority of the Arizona Game and Fish Commission, has public trust responsibility to manage wildlife and fish. Throughout the Proposed Plan/FEIS, the close, cooperative nature of the relationship is cited. The BLM and AGFD revised the current Master Memorandum of Understanding (MOU) at the writing of the Proposed Plan/FEIS that established protocols directing the cooperative working relationship between the agencies. The MOU provides context to enable both agencies to work in partnership and to make decisions in a consistent manner across the state. The guidelines established in the MOU apply to the implementation of this Approved Plan. In addition, a separate MOU has been signed giving AGFD cooperating agency status on BLM planning efforts in Arizona, including the efforts involved in preparation of this Approved Plan.

Any permit system or restriction of use or access will include coordination with other state and Federal entities that issue use permits on Federal lands to assure that authorized permittees have fair and reasonable access to their permitted activity. For example, should a permit system be implemented, the BLM will work in cooperation with AGFD to enable coordination of access for hunters with valid hunting licenses and permits for the affected hunting unit. Coordination with AGFD during development of management plans and enhancement of wildlife habitat, species diversity, riparian health, and other activities to achieve the optimum health of wildlife species and populations will continue. Administrative access may be allowed for AGFD staff for law enforcement, natural resource management, and other purposes. Arizona Game and Fish Department's use of motorized and mechanized equipment off designated routes on BLM-administered land is considered an administrative use and will be allowed in suitable locations (as agreed to by AGFD and the BLM) for such purposes including, but not limited to law enforcement activities, wildlife water supplementation (i.e., water hauling and maintenance, repair, building, or rebuilding of wildlife waters), collar retrieval, capture and release of wildlife, habitat manipulation (e.g., forage enhancement, burning, vegetation clearing, and planting.), fence construction (enclosures/exclosures), and research activities.

On NPS-administered lands within the Monument, the AGFD, BLM, and NPS will work cooperatively to manage habitat and wildlife. Following this working arrangement, wildlife decisions and specific actions will be developed through cooperative planning, focusing on

management that perpetuates a natural distribution of native wildlife in a mosaic of associated habitats in accordance with NPS Management Policies. Administrative access for AGFD staff (as agreed to by AGFD and NPS) will be allowed in suitable locations for law enforcement, natural resource management, and other purposes and will conform with NPS Management Policies generally, as well as minimum impact requirements in proposed wilderness.

On BLM-administered lands in the Monument, APHIS-WS and the AGFD oversee animal damage control, predator management, and control of exotic wildlife species and feral, non-permitted livestock. A 1995 MOU recognizes the legal authority of APHIS-WS to conduct such wildlife damage management on public lands. The BLM acknowledges the authority and will continue close coordination with APHIS-WS and AGFD, as well as the USFWS, U.S. Forest Service North Kaibab Ranger District, Glen Canyon NRA, Arizona State Land Department, Arizona State Brand Inspector, and other affected agencies on animal damage control efforts within the Monument. Arizona Game and Fish Department predator management will continue under AGFD strategic plans as well as species management plans.

PUBLIC INVOLVEMENT

The BLM and NPS will continue to actively seek the views of the public using techniques such as news releases, mass mailings, and website postings to ask for participation and to inform the public of new and ongoing project proposals, site-specific planning, and opportunities and timeframes for comment. The public is encouraged to actively participate in implementing these decisions by doing the following:

- Requesting that their name be added to project or NEPA mailing lists by sending or calling in a request (via mail, phone, or email) to the following address/phone number:

  Grand Canyon-Parashant National Monument
  345 East Riverside Drive
  St. George, UT 84790
  (435) 688-3200
  Email: Arizona_Strip@blm.gov

- Talking with a manager or staff member by calling or emailing
- Monitoring websites for project proposals or information, including the BLM website (www.az.blm.gov) or the NPS website (http://www.nps.gov/para)
- Attending public meetings and provide written comment on site-specific project proposals

The BLM and NPS will continue to coordinate and consult, both formally and informally, with various Federal and state agencies, Indian Tribes, local agencies, and officials, communities, and groups interested and involved in the management of the Monument.

Chapter 3



"The road's a natural filter.
Only the best people make it this far."

John Riffey, Tuweep Ranger, 1942-1980

CHAPTER 3: IMPLEMENTATION

IMPLEMENTATION SCHEDULE

Land use plan decisions are generally implemented or become effective upon approval of the plan and signing of the Record of Decision. These decisions include the effective date of land health standards and desired future or resource condition decisions, land use allocation decisions, and all special designations.

Management actions in this Approved Plan that require additional site-specific project planning, as funding becomes available, will require further environmental analysis, completion of 106 compliance for cultural resources, and Section 7 consultation. Implementation-level decisions, with the exception of routes designated open for off-highway vehicle use, are also contingent upon further environmental analysis, Section 106 compliance, and Section 7 consultation. Decisions to implement site-specific projects will be subject to administrative review at the time such decisions are made.

The Bureau of Land Management (BLM) and National Park Service (NPS) will continue to involve and collaborate with the public during implementation of this Approved Plan. Opportunities to become involved in plan implementation will include development of partnerships and community-based citizen working groups. The BLM and NPS invite citizens and user groups interested in the management of Grand Canyon-Parashant National Monument (the Monument) to become actively involved in the implementation of plan decisions. The BLM, NPS, and citizens can collaboratively develop site-specific goals and objectives that mutually benefit public land resources, local communities, and the people who live, work, or recreate on public lands.

MONITORING

Monitoring of actions related to implementing land use plans is an important part of adaptive management. Tracking the progress of actions and measuring changes resulting from these activities is important in either determining success or the need for a different management approach.

Many activities and events are monitored on the Monument. For example, grazing utilization and vegetation trends are measured to support decisions on allotment Standards and Guideline evaluations. A more detailed monitoring strategy is included in Table 3.1.

TABLE 3.1: PRELIMINARY MONITORING STRATEGIES					
Location(s)	**Issue/Objective**	**Indicator (what)**	**Protocol (how/ methods)**	**Frequency (when)**	***Trigger/Action**
Soil, Water, and Air					
Monument-wide	Study the effects of continuing erosion that endanger floodplain soils and threaten meadow soils. Map out these areas.	• Gully, rill, and sheet erosion • Vegetative cover, compaction	• Monitor erosion • Monitor Vegetative cover • Monitor impacts and gully progressions • Collect and analyze sedimentation and erosion data	• On-going	• N/A
Mt. Logan Meadows	Assess the effects of the restoration of them and their watersheds	• Soil water flux and genetic characteristics • Vegetative cover	• Visual inspection	• Early spring after snow melt	• N/A
Upper Langs Run watershed and other selected sites	Assess the effects of restoration projects	• Surface stability • Vegetative cover change • Sediment gains • Structural controls	• Visual inspection	• Annually to occasional	• N/A
Salinity control project areas and other saline soils	Assess maintenance and function for existing projects and the needs for new ones	• Structural damage • Surface or gully erosion • Salt content	• Structural damage • Severe erosion • High to moderate salt yield	• Annually to occasional	• N/A
Administrative Sites	Potable water quality testing	• Chemical • Bacteriological	• Water testing for coliform	• Several times a year	• Coliform contamination or exceeding chemical limits • Find source of contamination and clean up • Provide notice to public of non-potable water
Wildfire burns and other select	Assess the effects of disturbance and	• Erosion or stabilization	• Visual inspection	• As needed	• Large wildfire • Erosion and flooding

TABLE 3.1: PRELIMINARY MONITORING STRATEGIES					
Location(s)	**Issue/Objective**	**Indicator (what)**	**Protocol (how/ methods)**	**Frequency (when)**	***Trigger/Action**
disturbed areas	reclamation	• Vegetative cover			
Hazardous Materials					
Old cleaned-up site at Pakoon Springs	Keep clean of trash or chemicals that might weather out of reclaimed soils	Visible trash Chemical stains, odors, or sheens	• Visual inspection for trash or chemicals or odors	• Once per year after monsoon season	• Clean up, if necessary
Forest & Woodlands					
Monument-wide	Management of Public & Commercial Fuelwood Areas	Number of acres monitored	• Monitor stipulations • Monitor permits • Monitor effectiveness • Law Enforcement of Stipulation adherence	• Ongoing • Annually for selected sites and areas • As needed	• Terminate designated areas, designate new areas or boundaries, modify stipulations, limit permitted amounts, terminate permits
Monument-wide	Management of Public & Commercial Fuelwood Areas (associated with fuels reduction & restoration projects)	Number of acres monitored	• Monitor stipulations • Monitor permits • Monitor effectiveness • Law Enforcement of Stipulation adherence	• Ongoing • Annually for selected sites and areas • As needed, occasional	• Terminate designated areas, designate new areas or boundaries, modify stipulations, limit permitted amounts, terminate permits
Monument-wide	Management of Stewardship Projects	Number of acres monitored	• Monitor stipulations • Monitor contract adherence • Monitor project effectiveness	• Ongoing • Annually for selected sites and areas	• Terminate designated areas, designate new areas or boundaries, modify stipulations and/or project implementation, limit permitted amounts, terminate contract
Monument-wide	Management of Forest and Woodlands Restoration Projects (including other projects that attempt to or will change the character of	Number of acres monitored	• Monitor stipulations • Monitor contract/project adherence • Monitor project effectiveness	• Ongoing • Annually for selected sites and areas	• Terminate designated areas, designate new areas or boundaries, modify stipulations and or project implementation, limit permitted amounts, terminate

TABLE 3.1: PRELIMINARY MONITORING STRATEGIES					
Location(s)	**Issue/Objective**	**Indicator (what)**	**Protocol (how/ methods)**	**Frequency (when)**	***Trigger/Action**
	overstory vegetation)				contracts
Monument-wide	Management of Forest and Woodland Health	Number of acres monitored	• Monitor overall forest and woodland health issues (insect, disease, and stand density issues)	• Ongoing • Annually for selected sites and areas • As needed	• Determine appropriate management of problem issues
Cultural Resources					
Designated road system	Off-road impacts Route proliferation Vandalism Surface collection	Visual site inspections for: Site integrity Surface integrity	• Monitor and report (Law Enforcement, Site Stewards, Staff, local rancher) • Educate Public • Class III surveys	• Ongoing • Annually for selected sites and areas • As needed	• Impacts/excavate, reroute, inventory • Route closures
Standing structures and prehistoric intact features	Natural deterioration Vandalism	Visual site inspections for: Site integrity Structural integrity	• Monitor (Staff and Site Stewards)	• Annually for selected sites and areas • Ongoing	• Destruction of standing features/stabilization, restoration, allow deterioration • Record sites, assign to category
Monument-wide	Livestock grazing impacts to rock art, standing structures and features, rock shelters, caves, concentrations of cattle (trampling)	Visual site inspections for: Site integrity Surface integrity	• Section 106 for new facilities • Monitor – Site Stewards and staff	• As needed • Ongoing • Annually for selected sites and areas	• Impacts/mitigation, record, inventory area
Caves and Karst Resources					
Monument-wide	Monitor Visitor Use Impacts; Monitor for Natural Resource Degradation	• Graffiti • Trash • Trails • Damage to Speleotherms	• Monitor unacceptable impacts • Visual inspection • Set permanent photo documentation points • Photo document impacted	• As needed • Ongoing • Annually for selected sites and areas	• Restrict access • Clean, as necessary

TABLE 3.1: PRELIMINARY MONITORING STRATEGIES					
Location(s)	**Issue/Objective**	**Indicator (what)**	**Protocol (how/ methods)**	**Frequency (when)**	***Trigger/Action**
		• Hazardous Materials • Digging in cave • Vandalism in cave	areas • Create Visual Impact Evaluation System (VIES) for these caves and future caves as deemed necessary: Bobcat, Grand Wash, Basket, and Resort		
Recreation					
SRMAs	Produce targeted recreation opportunities specific to each RMZ	Realization of targeted benefits for each RMZ.	• Visitor surveys • Focus groups	• Every 5 years	• N/A
SRMAs	Produce targeted recreation opportunities specific to each RMZ	Physical setting conditions, such as remoteness, naturalness, facilities	• Monitor "development creep" with regard to authorizing expansion of designated road systems and recreation facilities into settings targeted as more primitive; monitor lack of development in RMZs where development was targeted • Monitor landscape change via VRM	• For every project proposed in SRMAs	• Targeted recreation benefits not realized • Adjust project to limit development appropriate to the SRMA/RMZ
SRMAs	Produce targeted recreation opportunities specific to each RMZ	Social setting conditions, such as group size, encounters with other users, and evidence of use	• Existing NAU protocols for evidence of use (rapid site inventory, human impact site monitoring) • Actual counts for group size and encounters	• Every 3-5 years for rapid site inventory • Every year to 2 years for human impact site monitoring, encounters and group size	• Targeted recreation benefits not realized • Sustained exceedance of social setting/assess need for visitor use management
SRMAs	Produce targeted recreation opportunities specific to each RMZ	Administrative setting conditions, such as visitor services,	• Monitor level of effort to provide visitor information and assistance appropriate to	• Project-by-project	• Targeted recreation benefits not realized

TABLE 3.1: PRELIMINARY MONITORING STRATEGIES					
Location(s)	**Issue/Objective**	**Indicator (what)**	**Protocol (how/ methods)**	**Frequency (when)**	***Trigger/Action**
		management controls, mechanized use	targeted settings • Monitor level of regulation, signing, and permitting applied as appropriate to targeted settings		
SRMAs, ERMA	National RMiS requirements	Number of visits, visitor days, etc.	• Traffic counters, visitor registers, Information Center counter, SRP post-use reports, direct counts	• Monthly for traffic and Information Center counters • Bi-monthly for visitor registers • Annually for SRPs	• Meet RMiS reporting requirements
Monument-wide	Authorizing recreation uses	Number of permits	• Counting commercial SRPs • Counting individual SRPs	• Monthly for RUPs • Post-use for commercial and competitive SRPs • Monthly for individual SRPS	• N/A
Monument-wide	Authorizing recreation uses	Number of permit violations	• Monitor authorized activities for permit stipulations compliance	• As needed	• Violations/suspend or revoke permit
ERMA	Resource protection, user conflict, visitor safety		•	•	• N/A
Wilderness					
Statutory wildernesses	Preservation of wilderness character	Number of acres monitored	• Patrol (foot or aerial) and staff report findings and recommendations • NEPA process • Existing NAU protocols for naturalness (rapid site inventory, human impact site	• Monthly patrol • Project-by-project • Every 3-5 years for rapid site inventory • Every year to 2 years for human impact site monitoring and	• N/A

TABLE 3.1: PRELIMINARY MONITORING STRATEGIES					
Location(s)	**Issue/Objective**	**Indicator (what)**	**Protocol (how/ methods)**	**Frequency (when)**	***Trigger/Action**
			monitoring) • Actual counts for solitude	solitude	
Statutory wildernesses	Preservation of wilderness character	Number of wilderness boundary vehicle violations	• Actual counts	• Ongoing	• Rehab damaged areas; educate the public, cite violators
Travel Management					
Designated road/trail system	Management of designated system	Number of roads/trails meeting targeted maintenance intensities	• Road/trail condition assessments	• Annually on rotating basis	• Unsafe conditions/prioritize repair of unsafe locations
Designated road/trail system	Management of designated system	Placement and retention of all signing	• Road/trail condition assessments	• Annually on rotating basis	• Safety concerns/prioritize replacement where signage is crucial to safe vehicle operations/ wayfinding
Designated road/trail system	Management of designated system	Average daily traffic	• Traffic counters on key roads/trails	• Monthly	• Increasing use/target heavily used areas for maintenance and safety inspecting
Designated road/trail system	Management of designated system	Number of illegal, off-system vehicle incursions	• Visual inspections • NAU protocols	• Ongoing • Annually for selected rotating areas	• Physical damage/rehab damaged area; educate public; cite violators
Wilderness Characteristics					
Monument-wide	Maintenance of wilderness characteristics	Naturalness, outstanding opportunities for primitive recreation and solitude	• NEPA process • Existing NAU protocols for naturalness (rapid site inventory, human impact site monitoring) • Actual counts for solitude	• Project-by-project • Every 3-5 years for rapid site inventory • Every 1- 2 years for human impact site monitoring and solitude	• Potential impact to wilderness characteristics/ modify project design and activities to retain wilderness characteristics and VRM class
Visual Resources					
Monument-wide	Management of targeted visual classes	Degree of contrast (landscape change)	• VRM contrast rating	• Project-by-project	• Potential impact to VRM classes/adjust project design

TABLE 3.1: PRELIMINARY MONITORING STRATEGIES					
Location(s)	**Issue/Objective**	**Indicator (what)**	**Protocol (how/ methods)**	**Frequency (when)**	***Trigger/Action**
		created			and activities to retain targeted visual resource class
Soundscapes					
Baseline inventory & selected site long-term monitoring on NPS lands	Maintenance of natural ambient sound characteristics: audibility, intensity, duration, frequency	Change in natural ambient sound: audibility, duration	• Measure human-caused intrusions: loudness/intensity • % Time above Ambient • % Time Audible • # of intrusions & duration	• Every 3-5 years following initial baseline inventory • Project basis as needed	• Modify activities under Monument authority • Seek relief from agencies with regulatory authority
T/E Species: Desert Tortoise					
Pakoon Springs road from Arizona border to Pakoon Springs	Monitor effects of use of roads on desert tortoise.	Document number of live and dead tortoise to assess road mortality along Pakoon Springs road. Document route proliferation.	• Early morning, low speed windshield survey by passenger • Total approx. 20 miles (10 mi each direction)	• Repeat weekly March thru April, monthly May thru Oct. • Repeat monitoring every 5 years	• Closures of other restrictions
Mojave Desert, desert tortoise habitat	Monitor number/density of desert tortoise.	Document numbers of live and dead tortoise and estimate tortoise population densities of desert tortoise.	• USFWS conducts line distance sampling (BLM contributes $2-$5k annually) • Random transects throughout NE Mojave Recovery Unit	• Repeat annually	• Contributes to range-wide recovery efforts and recovery planning, could lead to RMP amendment
T/E Species: Mexican Spotted Owl					
Canyon habitats	Assess potential MSO nesting sites based on suitable habitats identified by 2001 Willey model.	Document MSO nesting site suitability and presence or absence of MSO.	• Protocol established by MSO recovery team • 5-10 sites per year	• Repeat annually	• Contributes to range-wide recovery efforts and planning, could lead to RMP amendment
T/E Species: Southwestern Willow (SW) Flycatcher					
Riparian habitats	Assess all suitable and potential SW flycatcher nesting sites.	Document SW flycatcher nesting site suitability and presence	• Protocol established by SW flycatcher recovery team • 11 sites	• Repeat every other year	• Contributes to range-wide recovery efforts and recovery planning, could lead to RMP

TABLE 3.1: PRELIMINARY MONITORING STRATEGIES					
Location(s)	**Issue/Objective**	**Indicator (what)**	**Protocol (how/ methods)**	**Frequency (when)**	***Trigger/Action**
		or absence of SW flycatcher.			amendment
T/E Species: Peregrine Falcon					
Canyon eyrie sites	Assess specific nesting sites as assigned by AGFD and USFWS.	Document presence or absence of peregrine falcon.	• Protocol established by peregrine monitoring team • Up to 4 sites	• Repeat every year	• Contributes to range-wide recovery efforts and recovery planning, could lead to RMP amendment
T/E Species: Listed and Special Status Plants					
Monument-wide	To assess effects of management actions on populations of plants	Demography, counts, mortality, man-induced impacts	• Macroplots with tagged plants • Macroplots and transects using counts.	• Annually for listed plants, 1-3 years for special status plants	• Down trends (demographic or counts) caused by man induced impacts
Vegetation					
Monument-wide	Management of authorized uses	• Vegetative trend of key species • Precipitation	• Permanent photo plots, and Frequency transects, dry weight rank • Rain Can & Remote Automated Weather Station	• Every 4-8 years • Quarterly	• Up or down trend of key or undesirable species • Meeting or not meeting desired plant community objectives
Livestock grazing (BLM lands)					
Desert tortoise habitat	Management of livestock grazing	Vegetation utilization level	• Grazed class method	• Annually in use pastures	• Use levels in excess of 45%
Monument-wide	Management of livestock grazing	Vegetation utilization level	• Grazed class method	• Annually in use pastures	• Use levels in excess of 45%
Livestock grazing: (NPS lands)					
Baseline inventory & selected site long-term monitoring on NPS lands under grazing permit	Prevent impairment (DO-12); Maintain ecologic integrity of soils and vegetation	Plant utilization; soil integrity; deviation from plant community ecological potential	• TBD through study; • In concert with BLM Arizona Standards and Guidelines for Livestock Grazing Management	• TBD through research study	• TBD through research study

Fire and Fuels Management					
Monument-wide	Assess the effects of fire	Prescribed fire Fire use	• Long term photo plots • Vegetation plots • Burn severity • Others as needed	• Pre, during and post monitoring	• Planning of ignition • Ignition
Monument-wide	Assess the effects of fire	Wildfire	• Long term photo plots • Vegetation plots • Burn severity • Others as needed	• Mostly post monitoring	• Ignition
*Trigger/Action – What would trigger (a threshold) an action/What the BLM or NPS would do if monitoring shows an undesirable direction or action.					

ADAPTIVE MANAGEMENT

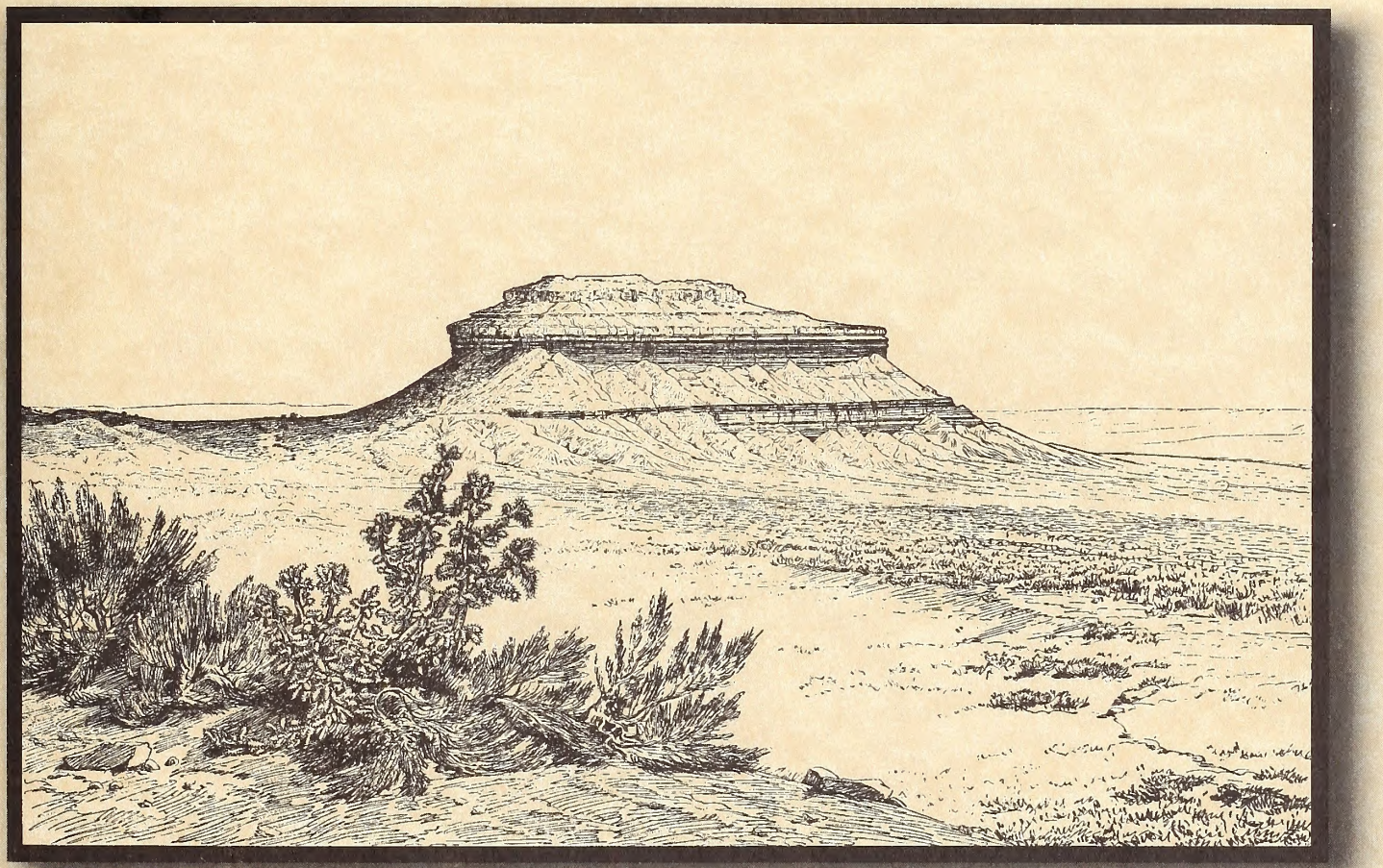
Adaptive management is a decision process that promotes flexible decision making that can be adjusted in the face of uncertainties as outcomes from management actions and other events become better understood. Careful monitoring of these outcomes both advances scientific understanding and helps adjust policies or operations as part of an iterative learning process. Adaptive management also recognizes the importance of natural variability in contributing to ecological resilience and productivity. It is not a "trial and error" process; rather, it emphasizes learning while doing. Adaptive management does not represent an end in itself: it represents a means to more effective decisions and enhanced benefits. Its true measure is in how well it helps meet environmental, social, and economic goals, increases scientific knowledge, and reduces tensions among stakeholders (U.S. Department of the Interior [DOI] 2007).

Adaptive management involves ongoing, real-time learning and knowledge creation, both in a substantive sense and in terms of the adaptive process itself. Though it is commonly thought that an adaptive approach can produce results quickly at low cost, the opposite is more likely to be true. An initial investment of time and effort will increase the likelihood of better decision-making and resource stewardship in the future, but patience, flexibility, and support are needed over the life of an adaptive management project. For these reasons, it is important to carefully consider the potential use of an adaptive approach, and to engage in careful planning and evaluation when adaptive management is used (DOI 2007).

Adaptive management involves synthesizing existing knowledge, exploring alternative actions, and making explicit forecasts about their results. Management actions and monitoring programs are carefully designed to generate reliable feedback and clarify the reasons underlying results. Actions and objectives are then adjusted based on this feedback and improved understanding to continue to try to achieve the desired future conditions. In addition, decisions, actions, and results are carefully documented and communicated to others, so that knowledge gained through experience is passed on rather than lost when individuals move or leave the organization.

The Monument staff and management will involve interested stakeholders in implementing the decisions in this Approved Plan and commit to an adaptive management process that will work toward achieving the identified management objectives. Results from ongoing monitoring and assessment will be used to adjust and improve these management decisions.

Appendices



"The desert lures a man on and on, from the red-walled canyons to the smoke-blue ranges beyond, in a futile but fascinating quest for the great, unimaginable treasure which the desert seems to promise. Once caught by this golden lure you become a prospector for life, condemned, doomed, exalted."

Edward Abbey in Desert Solitaire

LIST OF APPENDICES
FOR GRAND CANYON-PARASHANT NATIONAL MONUMENT
APPROVED PLAN

APPENDIX A: GRAND CANYON-PARASHANT NATIONAL MONUMENT PROCLAMATION (#7265) A-1

APPENDIX B: U.S. FISH AND WILDLIFE SERVICE CONSULTATION: PORTIONS OF THE BIOLOGICAL OPINION B-1

APPENDIX C: ARIZONA STANDARDS AND GUIDELINES FOR LIVESTOCK GRAZING MANAGEMENT AND RANGELAND HEALTH IMPLEMENTATION STATUS C-1

APPENDIX D: LIVESTOCK GRAZING ALLOTMENT MANAGEMENT STATUS D-1

APPENDIX E: LIVESTOCK GRAZING ALLOTMENT ACRES AND ANIMAL UNIT MONTHS (AUMs) BY LAND STATUS E-1

APPENDIX F: VEGETATION TREATMENT TOOLS AND METHODS F-1

APPENDIX G: CONSERVATION MEASURES FOR SPECIAL STATUS SPECIES G-1

APPENDIX H: VISUAL RESOURCE MANAGEMENT CLASSES AND OBJECTIVES FOR CLASSES H-1

APPENDIX I: RECLAMATION STIPULATIONS I-1

APPENDIX J: RECREATION MANAGEMENT AREAS J-1

APPENDIX K: TRAVEL MANAGEMENT AREAS, TRANSPORTATION PLAN CONTENTS, AND APPROPRIATE ROUTE CONSTRUCTION AND MAINTENANCE STANDARDS BY TRAVEL MANAGEMENT AREA .. K-1

APPENDIX L: LIST OF PREPARERS L-1

APPENDIX A

GRAND CANYON-PARASHANT NATIONAL MONUMENT PROCLAMATION

APPENDIX A: GRAND CANYON-PARASHANT NATIONAL MONUMENT PROCLAMATION

Establishment of the Grand Canyon-Parashant National Monument (#7265)

By the President of the United States of America

A Proclamation

The Grand Canyon-Parashant National Monument is a vast, biologically diverse, impressive landscape encompassing an array of scientific and historic objects. This remote area of open, undeveloped spaces and engaging scenery is located on the edge of one of the most beautiful places on earth, the Grand Canyon. Despite the hardships created by rugged isolation and the lack of natural waters, the monument has a long and rich human history spanning more than 11,000 years, and an equally rich geologic history spanning almost 2 billion years. Full of natural splendor and a sense of solitude, this area remains remote and unspoiled, qualities that are essential to the protection of the scientific and historic resources it contains. The monument is a geological treasure. Its Paleozoic and Mesozoic sedimentary rock layers are relatively undeformed and unobscured by vegetation, offering a clear view to understanding the geologic history of the Colorado Plateau. Deep canyons, mountains, and lonely buttes testify to the power of geological forces and provide colorful vistas. A variety of formations have been exposed by millennia of erosion by the Colorado River. The Cambrian, Devonian, and Mississippian formations (Muav Limestone, Temple Butte Formation, and the Redwall Limestone) are exposed at the southern end of the lower Grand Wash Cliffs. The Pennsylvanian and Permian formations (Calville Limestone, Esplanade Sandstone, Hermit Shale, Toroweap Formation, and the Kaibab Formation) are well exposed within the Parashant, Andrus, and Whitmore Canyons, and on the Grand Gulch Bench. The Triassic Chinle and Moenkopi Formations are exposed on the Shivwits Plateau, and the purple, pink, and white shale, mudstone, and sandstone of the Triassic Chinle Formation are exposed in Hells Hole.

The monument encompasses the lower portion of the Shivwits Plateau, which forms an important watershed for the Colorado River and the Grand Canyon. The Plateau is bounded on the west by the Grand Wash Cliffs and on the east by the Hurricane Cliffs. These cliffs, formed by large faults that sever the Colorado Plateau slicing north to south through the region, were and are major topographic barriers to travel across the area. The Grand Wash Cliffs juxtapose the colorful, lava-capped Precambrian and Paleozoic strata of the Grand Canyon against the highly faulted terrain, recent lake beds, and desert volcanic peaks of the down-dropped Grand Wash trough. These cliffs, which consist of lower and upper cliffs separated by the Grand Gulch Bench, form a spectacular boundary between the basin and range and the Colorado Plateau geologic provinces. At the south end of the Shivwits Plateau are several important tributaries to the Colorado River, including the rugged and beautiful Parashant, Andrus, and Whitmore canyons. The Plateau here is capped by volcanic rocks with an array of cinder cones and basalt flows, ranging in age from 9 million to only about 1000 years old. Lava from the Whitmore and Toroweap areas flowed into the Grand Canyon and dammed the river many times over the past several million years. The monument is pocketed with sinkholes and breccia pipes, structures associated with volcanism and the collapse of underlying rock layers through ground water dissolution.

Fossils are abundant in the monument. Among these are large numbers of invertebrate fossils, including bryozoans and brachiopods located in the Calville limestone of the Grand Wash Cliffs, and brachiopods, pelecypods, fenestrate bryozoa, and crinoid ossicles in the Toroweap and Kaibab formations of Whitmore Canyon. There are also sponges in nodules and pectenoid pelecypods throughout the Kaibab formation of Parashant Canyon. The Grand Canyon-Parashant National Monument contains portions of geologic faults, including the Dellenbaugh fault, which cuts basalt flows dated 6 to 7 million years old, the Toroweap fault, which has been active within the last 30,000 years, the Hurricane fault, which forms the Hurricane Cliffs and extends over 150 miles across northern Arizona and into Utah, and the Grand Wash fault, which bounds the west side of the Shivwits Plateau and has approximately 15,000 feet of displacement across the monument.

Archaeological evidence shows much human use of the area over the past centuries. Because of their remoteness and the lack of easy road access, the sites in this area have experienced relatively little vandalism. Their good condition distinguishes them from many prehistoric resources in other areas. Prehistoric use is documented by irreplaceable rock art images, quarries, villages, watchtowers, agricultural features, burial sites, caves, rockshelters, trails, and camps. Current evidence indicates that the monument was utilized by small numbers of hunter-gatherers during the Archaic Period (7000 B.C. to 300 B.C.). Population and utilization of the monument increased during the Ancestral Puebloan Period from the Basketmaker II Phase through the Pueblo II Phase (300 B.C. to 1150 A.D.), as evidenced by the presence of pit houses, habitation rooms, agricultural features, and pueblo structures. Population size decreased during the Pueblo III Phase (1150 A.D. to 1225 A.D.). Southern Paiute groups replaced the Pueblo groups and were occupying the monument at the time of Euro-American contact. Archeological sites in the monument include large concentrations of ancestral Puebloan (Anasazi or Hitsatsinom) villages, a large, intact Pueblo II village, numerous archaic period archeological sites, Ancestral Puebloan sites, and Southern Paiute sites. The monument also contains areas of importance to existing Indian tribes. In 1776, the Escalante-Dominguez expedition of Spanish explorers passed near Mount Trumbull. In the first half of the 19th century, Jedediah Smith, Antonio Armijo, and John C. Fremont explored portions of this remote area. Jacob Hamblin, a noted Mormon pioneer, explored portions of the Shivwits Plateau in 1858 and, with John Wesley Powell, in the 1870s. Clarence Dutton completed some of the first geological explorations of this area and provided some of the most stirring written descriptions. Having traversed this area by wagon at the request of the territorial legislature, Sharlot Hall recommended it for inclusion within the State of Arizona when it gained Statehood in 1912. Early historic sawmills provided timber that was hauled 70 miles along the Temple Trail wagon road from Mt. Trumbull down the Hurricane Cliffs to St. George, Utah. Ranch structures and corrals, fences, water tanks, and the ruins of sawmills are scattered across the monument and tell the stories of the remote family ranches and the lifestyles of early homesteaders. There are several old mining sites dating from the 1870s, showing the history of mining during the late 19th and early 20th centuries. The remote and undeveloped nature of the monument protects these historical sites in nearly their original context.

The monument also contains outstanding biological resources preserved by remoteness and limited travel corridors. The monument is the junction of two physiographic ecoregions: the Mojave Desert and the Colorado Plateau. Individually, these regions contain ecosystems extreme to each other, ranging from stark, arid desert to complex, dramatic higher elevation plateaus, tributaries, and rims of the Grand Canyon. The western margin of the Shivwits Plateau marks the boundary between the Sonoran/Mojave/Great Basin floristic provinces to the west and south, and the Colorado Plateau province to the northeast. This intersection of these biomes is a distinctive and remarkable feature. Riparian

corridors link the plateau to the Colorado River corridor below, allowing wildlife movement and plant dispersal. The Shivwits Plateau is in an arid environment with between 14 to 18 inches of precipitation a year. Giant Mojave Yucca cacti proliferate in undisturbed conditions throughout the monument. Diverse wildlife inhabit the monument, including a trophy-quality mule deer herd, Kaibab squirrels, and wild turkey. There are numerous threatened or endangered species as well, including the Mexican spotted owl, the California condor, the desert tortoise, and the southwestern willow flycatcher. There are also candidate or sensitive species, including the spotted bat, the western mastiff bat, the Townsend's big eared bat, and the goshawk, as well as two federally recognized sensitive rare plant species: *Penstemon distans* and *Rosa stellata*. The ponderosa pine ecosystem in the Mt. Trumbull area is a biological resource of scientific interest, which has been studied to gain important insights regarding dendroclimatic reconstruction, fire history, forest structure change, and the long-term persistence and stability of presettlement pine groups.

Section 2 of the Act of June 8, 1906 (34 Stat. 225, 16 U.S.C. 431) authorizes the President, in his discretion, to declare by public proclamation historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest that are situated upon the lands owned or controlled by the Government of the United States to be national monuments, and to reserve as a part thereof parcels of land, the limits of which in all cases shall be confined to the smallest area compatible with the proper care and management of the objects to be protected.

WHEREAS it appears that it will be in the public interest to reserve such lands as a national monument to be known as the Grand Canyon-Parashant National Monument:

NOW, THEREFORE, I, WILLIAM J. CLINTON, President of the United States of America, by the authority vested in me by section 2 of the Act of June 8, 1906 (34 Stat. 225, 16 U.S.C. 431), do proclaim that there are hereby set apart and reserved as the Grand Canyon-Parashant National Monument, for the purpose of protecting the objects identified above, all lands and interests in lands owned or controlled by the United States within the boundaries of the area described on the map entitled ``Grand Canyon-Parashant National Monument'' attached to and forming a part of this proclamation. The Federal land and interests in land reserved consist of approximately 1,014,000 acres, which is the smallest area compatible with the proper care and management of the objects to be protected. For the purpose of protecting the objects identified above, all motorized and mechanized vehicle use off road will be prohibited, except for emergency or authorized administrative purposes. Nothing in this proclamation shall be deemed to enlarge or diminish the jurisdiction of the State of Arizona with respect to fish and wildlife management.

The establishment of this monument is subject to valid existing rights.

All Federal lands and interests in lands within the boundaries of this monument are hereby appropriated and withdrawn from all forms of entry, location, selection, sale, or leasing or other disposition under the public land laws, including but not limited to withdrawal from location, entry, and patent under the mining laws, and from disposition under all laws relating to mineral and geothermal leasing, other than by exchange that furthers the protective purposes of the monument. Sale of vegetative material is permitted only if part of an authorized science-based ecological restoration project. Lands and interests in lands within the proposed monument not owned by the United States shall be reserved as a part of the monument upon acquisition of title thereto by the United States.

This proclamation does not reserve water as a matter of Federal law nor relinquish any water rights held by the Federal Government existing on this date. The Federal land managing agencies shall work with appropriate State authorities to ensure that water resources needed for monument purposes are available.

The Secretary of the Interior shall manage the monument through the Bureau of Land Management and the National Park Service, pursuant to applicable legal authorities, to implement the purposes of this proclamation. The National Park Service and the Bureau of Land Management shall manage the monument cooperatively and shall prepare an agreement to share, consistent with applicable laws, whatever resources are necessary to properly manage the monument; however, the National Park Service shall continue to have primary management authority over the portion of the monument within the Lake Mead National Recreation Area, and the Bureau of Land Management shall have primary management authority over the remaining portion of the monument.

The Bureau of Land Management shall continue to issue and administer grazing leases within the portion of the monument within the Lake Mead National Recreation Area, consistent with the Lake Mead National Recreation Area authorizing legislation. Laws, regulations, and policies followed by the Bureau of Land Management in issuing and administering grazing leases on all lands under its jurisdiction shall continue to apply to the remaining portion of the monument.

Nothing in this proclamation shall be deemed to revoke any existing withdrawal, reservation, or appropriation; however, the national monument shall be the dominant reservation. Warning is hereby given to all unauthorized persons not to appropriate, injure, destroy, or remove any feature of this monument and not to locate or settle upon any of the lands thereof.

IN WITNESS WHEREOF, I have hereunto set my hand this eleventh day of January, in the year of our Lord two thousand, and of the Independence of the United States of America the two hundred and twenty-fourth.

WILLIAM J. CLINTON

APPENDIX B

U.S. FISH AND WILDLIFE SERVICE CONSULTATION PORTIONS OF THE BIOLOGICAL OPINION

INCIDENTAL TAKE, REASONABLE AND PRUDENT MEASURES WITH TERMS AND CONDITIONS, AND CONSERVATION RECOMMENDATIONS

APPENDIX B: U.S. FISH AND WILDLIFE SERVICE CONSULTATION: PORTIONS OF THE BIOLOGICAL OPINION

INCIDENTAL TAKE, REASONABLE AND PRUDENT MEASURES WITH TERMS AND CONDITIONS, AND CONSERVATION RECOMMENDATIONS

The following are pages 105 through 118 from the Biological Opinion for the Arizona Strip Resource Management Plan, dated November 7, 2007 (refer to Fish and Wildlife Service [USFWS] document number AESO/SE [Arizona Ecological Services Office/Species Endangered], 22410-2002-F-0277-R1, 22410-2007-F-0463).

INCIDENTAL TAKE STATEMENT

Section 9 of the Endangered Species Act and Federal regulations pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. "Take" is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. "Harm" is defined (50 CFR 17.3) to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. "Harass" is defined (50 CFR 17.3) as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding or sheltering. "Incidental take" is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

AMOUNT OF EXTENT OF TAKE

We recognize that some flexibility is built into, and some uncertainty is inherent in, some of the conservation measures that are part of the proposed action. We included consideration of that flexibility and uncertainty into our analysis in determining the amount of incidental take that we anticipate for each species.

Desert Tortoise

We anticipate that the following incidental take of desert tortoises could occur as a result of the proposed action. Activities that may result in incidental take include vegetation treatments, lands and realty actions, livestock grazing, minerals exploration and development, recreational

activities, and travel management. The incidental take is expected to be in the form of harm (injury or mortality related to project activities, livestock trampling, increased human access and uses) and/or harassment (resulting from habitat degradation or loss, loss of forage, disturbance of individuals during the breeding season, or moving animals out of harm's way). A tortoise refers to one desert tortoise or one clutch of desert tortoise eggs.

1. All desert tortoises found in harm's way may be captured and moved according to permit stipulations and protocol. We estimate that an average of 10 tortoises per year may be harassed by project activities. We will not consider this level of incidental take to be exceeded as long as all conservation measures included in this opinion are followed and individual site-specific consultations are completed for these actions.

2. Thirty desert tortoises may be injured or killed by project activities and Bureau of Land Management (BLM) authorizations over the next 20 years.

These estimates are based upon the small number of desert tortoises likely to occur in the project areas, the ability of biological monitors to detect and move adult tortoises, the timing of surface disturbing activities during the tortoise inactive period, and the lands available for disposal that are located in low quality desert tortoise habitat.

The above anticipated take and our description of the effects of the action are based, in part, on the assumption that no more than 40 acres within DWMAs/ACECs will be disturbed as a result of authorized projects in the form of rights-of-ways and temporary use permits; no more than 20 acres will be disturbed in DWMAs/ACECs due to locatable mineral extraction; no more than 20 acres will be disturbed in DWMAs/ACECs due to mineral leasing. The BA does not quantify the acreage of land disposals or other actions that could occur outside of DWMAs/ACECs but within desert tortoise habitat; this estimate is based on the assumption that tortoise densities are low in these parcels and that no designated critical habitat will be leased, exchanged, or disposed of. If these limits are exceeded, BLM should informally consult with the USFWS to determine if formal consultation should be reinitiated. Also, although we anticipate loss of desert tortoises as a result of private development of land disposal and exchange parcels, this incidental take statement does not authorize agencies, individuals, or parties other than the BLM to incidentally take desert tortoises. Thus, if the actions of others may result in an incidental take of tortoise, such as take associated with development of disposal parcels, those individuals must comply with the Act before such incidental take occurs.

The USFWS completed a biological opinion on September 3, 2004 (02-21-03-F-0210) for a fire and fuels management program on BLM-administered lands within Arizona. That opinion issued an incidental take statement for desert tortoise for fire suppression activities on the Arizona Strip. That programmatic opinion included incidental take that could occur from fire suppression as a result of this proposed action. The following Incidental Take Statement is carried forward from the 2004 opinion:

Fire Suppression

We anticipate that incidental take of desert tortoises could occur as a result of fire suppression. We anticipate that the following take of desert tortoises could occur, with individuals experiencing effects ranging from harassment, harm, injury, and/or mortality, as a result of the fire suppression actions (a tortoise refers to one desert tortoise or one clutch of desert tortoise eggs):

1. Four desert tortoises every two years resulting from the following activities: a) operation of vehicles and equipment; b) development of crew camps, equipment staging areas, and aircraft landing/fueling sites; c) construction of firelines; d) use of retardants; and e) setting of backfires.
2. Ten desert tortoises every five years as a result of moving animals from harm's way during fire suppression activities.

Yuma Clapper Rail

We do not anticipate that the proposed action will result in incidental take of any Yuma clapper rails.

California Condor

This Amount or Extent of Take section applies to condors occurring on NPS-administered land within the Arizona Strip District within the California condor nonessential experimental population, and Arizona Strip District land outside of the nonessential experimental population area.

Because condors that occur in the project area are known and are monitored, detecting any incidences of harm, harassment, injury, or death of individuals will be straightforward. However, because condors occur only rarely outside of the nonessential experimental population area, and because these areas are a considerable distance from nesting and roosting habitat, we do not anticipate that the proposed action will incidentally take any California condors.

Mexican Spotted Owl

As of the date of this biological opinion, most of the approximately 13,000 acres of Mexican Spotted Owl (MSO) canyon habitat on BLM land in the project area have not been surveyed to protocol, and no MSO PACs have been designated. However, BLM considers the unsurveyed habitat to be occupied by MSO due to the presence of key habitat components in these areas that provide high potential for nesting and roosting MSO to occupy the area. Based upon this information, we are reasonably certain MSO currently occur within the action area. As surveys

are conducted over the life of the proposed action, MSO may be detected in the project area. The USFWS anticipates that incidental take of MSO may result from vegetation treatments (not including fuels management), noxious weed control, mineral development, and permitted recreation that may be authorized under the proposed action. We anticipate that the take of MSOs will be difficult to detect because finding a dead or impaired specimen is unlikely, especially due to the remote nature of most of the MSO habitat in the action area. However, the level of incidental take can be anticipated by the loss of key habitat components and long-term disturbance that may affect the reproductive success and survival of the MSO within the project area. We anticipate that four MSO (two pairs) associated with habitat the BLM considers to be occupied (Paria, Kanab, and Hack canyon areas) may be taken as a result of the proposed action. The incidental take is expected to be in the form of harm and harassment resulting from the disruption of breeding, feeding, and sheltering activities from mineral development, permitted recreation, vegetation treatments and management, and noxious weed control.

The USFWS completed a biological opinion on September 3, 2004 (02-21-03-F-0210) for a fire and fuels management program on BLM-administered lands within Arizona. That opinion issued an incidental take statement for MSO for fire suppression and fuels management activities. That programmatic opinion included incidental take that could occur from the fire management program as a result of this proposed action. The following Incidental Take Statement is carried forward from the 2004 opinion:

Fire Suppression, and Fire and Fuels Management Treatments

We anticipate that incidental take of MSO could occur as a result of fire suppression, wildland fire use, prescribed fire, and mechanical treatments. We anticipate that the take of MSOs will be difficult to detect because finding a dead or impaired specimen is unlikely, especially due to the remote nature of most of the MSO habitat in the action area. However, the level of incidental take can be anticipated by the loss of essential elements in the habitat and long-term disturbance that may affect the reproductive success and survival of the MSO within the project area. We anticipate that two MSO (one pair) could be taken as a result of the proposed action. The incidental take is expected to be in the form of harm and harassment resulting from:

1. Harm through long-term disturbance from actions in unsurveyed MSO habitat associated with the proposed action. Unknown MSO may be present during wildland fire use, mechanical treatments, prescribed fire, and/or suppression actions, which may result in direct impacts to owls, disrupted reproduction, and/or the ability of the habitat to provide for essential elements of survival for resident MSO.
2. Harm through the reduction of MSO nesting and roosting habitat due to temporary habitat loss that may result from mechanical thinning, prescribed or wildland fire, and/or fire suppression actions that result in the removal of MSO habitat components (multi-storied

canopy, coarse woody debris, snags) to the extent that at least near-term survival of MSO within that habitat is not likely.

3. Harassment through the reduction of the habitat suitability for prey species, thus limiting the availability of prey for owls. Habitat suitability will be decreased through the loss of coarse woody debris and herbaceous vegetation following prescribed fires. These actions could impair the ability of MSO to survive and/or successfully raise young.

Southwestern Willow Flycatcher

The USFWS anticipates Southwestern Willow Flycatchers (SWWFs) could be taken as a result of harm (habitat loss) and harassment (disturbance) due to recreation activities and/or vegetation treatments. The anticipated level of take is the failure of one nesting attempt every three years. The incidental take is expected to be in the form of harassment and/or harm due to nest failure or the inability to nest due to the loss of suitable habitat.

The USFWS completed a biological opinion on September 3, 2004 (file number 02-21-03-F-0210) for a fire and fuels management program on BLM-administered lands within Arizona. That opinion issued an incidental take statement for SWWF for fire suppression activities. That programmatic opinion included incidental take that could occur from fire suppression as a result of this proposed action. The following Incidental Take Statement is carried forward from the 2004 opinion:

Fire Suppression

BLM has proposed fire suppression actions that, when wildfires occur, are expected to reduce the overall adverse effects to SWWF and their habitat. Although we are unable to determine where or when incidental take of SWWF could occur as a result of fire suppression actions, take as a result of these actions has occurred in the past. We anticipate that the take of SWWF will be difficult to detect because finding a dead or impaired specimen is unlikely. Survey data may not be available prior to a wildfire ignition; however, locations of existing territories on or adjacent to BLM land are known. The level of incidental take can be anticipated by the loss of essential elements in the habitat and long-term disturbance that may affect the reproductive success and survival of the SWWF within the project area. The average number of pairs per site within the Middle Gila/San Pedro Management Unit, where territories on BLM-administered land were found in 2004, is 5.2. Fire suppression actions within one habitat site will likely remove all habitat within the site and/or disturb all birds within the site. We anticipate that five pairs (ten SWWF) and their eggs and young could be taken as a result of the proposed action[1]. The incidental take is expected to be in the form of harassment, harm, and mortality resulting from:

[1] This level of incidental take applies to BLM actions throughout Arizona as a result of fire suppression activities.

1. Harassment through long-term disturbance from fire suppression actions in occupied SWWF habitat associated with the proposed action. SWWF present during fire suppression actions will be directly impacted, resulting in disrupted reproduction, and/or loss of habitat that provides for the essential elements of survival.

2. Harm through the loss of SWWF nesting habitat due to temporary habitat loss that may result from backburning, bulldozing, aircraft use, and/or water drops during fire suppression that remove SWWF habitat components (multi-storied canopy, dense vegetation) to the extent that the habitat patch is no longer suitable for nesting by SWWF.
3. Mortality of SWWF eggs or young in nests from fire suppression actions in occupied SWWF habitat.

Brady Pincushion Cactus, Holmgren Milk Vetch, Jones' Cycladenia, Siler Pincushion Cactus, Welsh's Milkweed

Sections 7(b)(4) and 7 (o)(2) of the Act do not apply to the incidental take of listed plant species. However, protection of listed plants is provided to the extent that the Act requires a Federal permit for removal or reduction to possession of threatened or endangered plants from areas under Federal jurisdiction, or for any act that will remove, cut, dig up, or damage or destroy endangered plants on any other area in knowing violation of any regulation of any State or in the course of any violation of a State criminal trespass law. Neither incidental take authorization nor recovery permits are needed for implementation of the proposed action.

The USFWS will not refer the incidental take of any migratory bird or bald eagle for prosecution under the Migratory Bird Treaty Act of 1918, as amended (16 U.S.C. §§ 703-712), or the Bald and Golden Eagle Protection Act of 1940, as amended (16 U.S.C. §§ 668-668d), if such take is in compliance with the terms and conditions (including amount and/or number) specified herein.

EFFECT OF THE TAKE

In this biological opinion, we have determined that this level of anticipated take is not likely to result in jeopardy to these species or destruction or adverse modification of critical habitat.

REASONABLE AND PRUDENT MEASURES WITH TERMS AND CONDITIONS

In order to be exempt from the prohibitions of section 9 of the Act, BLM must comply with the following terms and conditions (lettered and Roman numeral items), which implement the reasonable and prudent measures (numbered items) and outline reporting/monitoring requirements. The terms and conditions are non-discretionary.

Desert Tortoise

The following reasonable and prudent measures are necessary and appropriate to minimize take of desert tortoise:

1. BLM shall implement programs and procedures to minimize injury or mortality of tortoises during project activities.

   A. BLM will include the following stipulations in BLM-authorized or BLM-conducted activities within desert tortoise habitat, except livestock grazing and fire suppression (if precluded by protection of valuable property, resources, or human safety).

      i. All individuals handling tortoises must meet the USFWS desert tortoise monitor or biologist qualifications requirements (see Appendix D). Permitting of these individuals may be done through application for a section 10(a)(1)(a) research and recovery permit, or through project-specific section 7 consultation.

      ii. Designate a field contact representative (FCR) who will have the authority to halt all non-emergency project activity should any danger to a listed species arise. Work will only resume after hazards to the listed species are removed.

      iii. Authorized biologists will act as biological monitors and be present during all construction activities for the protection of desert tortoises and other listed species. These biological monitors will be responsible for determining compliance with measures as defined in the biological opinion or other agreements between the project proponent and agencies.

      iv. A biological monitor will be assigned each activity within the project site requiring large equipment. A biological monitor will also be assigned to all backfilling, recontouring, and reclamation activities.

      v. Authorized activities will require monitoring of the desert tortoise population throughout the duration of the project. The appropriate level of monitoring will be developed in coordination with BLM and USFWS. To ensure desired results are being achieved, minimization measures will be evaluated and, if necessary, section 7 consultation reinitiated.

      vi. For drilling activities, where technically and economically feasible, use directional drilling, or horizontal, or multiple wells from the same pad to reduce surface disturbance and eliminate drilling in occupied desert tortoise habitat.

vii. Within DWMAs/ACECs during the tortoise active season (March 15-October 15), set a 20 mph speed limit on BLM roads.

viii. Limit new access routes created by the project.

ix. Powerlines will be minimized and if built, include anti-perching mechanisms to discourage raptors and corvids. Monitoring of such use may be necessary. Powerline alignment should be kept within existing utility corridors.

x. Uncontrolled domestic dogs will be prohibited from the project site and site access routes. Use of firearms, except by law enforcement officers or licensed hunters during lawful hunting activities will also be prohibited.

xi. No standing water as a result of project operations will be permitted.

2. BLM shall take measures to eliminate or minimize take of desert tortoises resulting from livestock grazing.

   A. The BLM shall monitor compliance with livestock removal from those allotments with seasonal restrictions (October 15 to March 15) and/or compliance on required pasture moves in the allotments managed with deferred grazing and take prompt action to resolve unauthorized grazing uses.

   B. The BLM shall monitor compliance with the established key forage use threshold of 45 percent current annual growth on allotments with desert tortoise habitat to ensure that over-utilization of forage does not occur.

   C. The BLM shall complete proposed fencing to implement proposed management changes and to exclude livestock from areas identified for closure in a timely manner.

3. The BLM shall take measures to minimize incidental take from recreational activities and travel.

   A. Upon implementation of the route designation/closure plan, make available to the public a route designation map that displays all open routes and clearly explains vehicle, camping, recreational, and other public use regulations and opportunities in the DWMAs/ACECs, and explains the purpose of the DWMAs/ACECs.

   B. Use various mechanisms of public outreach to inform the public about the DWMAs/ACECs and recovery of the desert tortoise. These mechanisms may include interpretive displays, news releases, and open houses to answer questions about DWMAs/ACEC designation and management, and/or other actions.

4. The BLM shall submit annual reports as described in Reporting Requirements, below. Specifically for desert tortoises, the report shall briefly document for the previous calendar year actions taken to implement these terms and conditions, surface-disturbing activities authorized, the effectiveness of these terms and conditions at reducing take of desert tortoise, actual acreage of desert tortoise habitat disturbed, numbers of tortoises taken, including animals injured or killed, the number of desert tortoises excavated from burrows, the number of desert tortoises moved from construction sites, and information on individual desert tortoise encounters. The report shall make recommendations for modifying or refining these terms and conditions to enhance desert tortoise protection and reduce needless hardship on the BLM and users of public lands.

Mexican Spotted Owl

The following reasonable and prudent measure and terms and conditions are necessary and appropriate to minimize take of MSO.

1. The Arizona Strip District Office (ASDO) shall take measures to minimize effects to individuals from project activities.

   A. BLM will work with us to proactively develop appropriate measures to protect individual MSO from the site-specific effects of the activities authorized by the proposed action.

2. BLM shall submit annual reports as described in Reporting Requirements, below.

Southwestern Willow Flycatcher

The following reasonable and prudent measures and terms and conditions are necessary and appropriate to minimize take of SWWF.

1. BLM shall minimize the site-specific effects on SWWF of activities authorized by the proposed action.

   A. The BLM will rehabilitate all undesignated routes used by OHVs within riparian areas, or areas with the potential to support SWWF breeding habitat. This can include obliterating the beginnings and ends of undesignated routes so that the routes are not accessible or visible to the public.

   B. The BLM will monitor other recreational activities that contribute to degradation of habitat on BLM-administered lands along the Virgin River and Kanab Creek and take appropriate measures to minimize those activities or modify them to reduce habitat degradation.

2. The BLM shall monitor the effects of incidental take and submit annual reports as described in Reporting Requirements, below.

   A. ASDO shall provide information on survey status for each area of suitable habitat, including location, size, shape, and spacing of habitat areas; either the date(s) surveyed (according to current protocol) or indication that the area has not been surveyed, and any other available information.

Additionally, the following reasonable and prudent measure with terms and conditions are carried forward from the September 3, 2004 opinion (02-21-03-F-0210):

3. Minimize the effects of harassment, harm, and mortality to SWWFs.

   A. In cooperation with us, and using guidance from the SWWF recovery plan, BLM shall incorporate the elements recommended for fire risk evaluation and planning into its Fire Management Plans for all current flycatcher breeding sites on or adjacent to BLM-administered lands. This planning effort shall be initiated prior to the 2006 wildfire season.

   B. If additional sites become occupied over the life of the land use plan Amendment, BLM shall include them in the yearly Fire Management Plans in cooperation with us, prior to the next wildfire season.

REPORTING REQUIREMENTS

The BLM shall submit annual monitoring reports to the Arizona Ecological Services Field Office by February 1 beginning in year 2009. These reports shall briefly document for the previous calendar year the effectiveness of the terms and conditions and locations of listed species observed, and, if any are found dead, suspected cause of mortality. The report shall also summarize tasks accomplished under the conservation measures and terms and conditions. The report shall make recommendations for modifying or refining conservation measures and terms and conditions to enhance listed species protection or reduce needless hardship on the BLM and its permittees.

Disposition of Dead or Injured Listed Species

Upon locating a dead, injured, or sick listed species initial notification must be made to the USFWS's Law Enforcement Office, 2450 W. Broadway Rd, Suite 113, Mesa, Arizona, 85202, telephone: 480/967-7900) within three working days of its finding. Written notification must be made within five calendar days and include the date, time, and location of the animal, a photograph if possible, and any other pertinent information. The notification shall be sent to the

Law Enforcement Office with a copy to this office. Care must be taken in handling sick or injured animals to ensure effective treatment and care, and in handling dead specimens to preserve the biological material in the best possible state.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

1. We recommend that BLM coordinate with us to develop specific management actions within ACECs to further protect special status species.

2. We recommend that BLM continue to assist Lake Mead National Recreation Area; other BLM offices in Utah, Nevada, and California; and other land managers in the northeastern Mojave recovery unit in the development of regional planning efforts to implement the recovery plan, and in the integration of those plans with the Arizona Strip Management Plan.

3. We recommend that BLM fully implement the Desert Tortoise Recovery Plan and subsequent revisions of the plan.

4. We recommend that BLM manage activities so that they do not contribute to the proliferation of predators within desert tortoise habitat.

5. We recommend that BLM construct new wildlife guzzlers in desert tortoise habitat only if they are designed so as to exclude desert tortoises, and if sufficient forage is available.

6. We recommend that the BLM coordinate and partner with other local, State, and Federal agencies as well as private groups to sponsor and/or assist with public education regarding desert tortoise conservation to enhance public support for conservation activities. Target groups for education and outreach may include OHV groups, hunting groups, Home Owner Associations, scout troops, public schools, libraries, and other audiences and venues associated with regional land use and/or educational programming.

7. We recommend that BLM support and participate in inventory and annual monitoring of Yuma clapper rails and their habitats within the planning area. The FEIS states that surveys will be done every other year; however, the multi-agency protocol is for annual surveys.

8. We recommend that BLM require implementation of conservation measures for California condors for all activities within the non-essential experimental population area, unless firefighter or public safety, or the protection of valuable property, improvements, or natural resources, render them infeasible during a particular operation.

9. We recommend that BLM continue to work with Arizona Game and Fish Department (AGFD) to educate and encourage hunters to use non-lead bullets when hunting game in condor habitat.

10. We recommend that BLM conduct comprehensive surveys for MSO in predicted MSO habitat according to current survey protocol.

11. We recommend that BLM develop environmental education and information materials on the SWWF and other riparian species and make these materials available to the public at the ASDO office in St. George, Utah.

12. We recommend that BLM work with us to proactively develop appropriate measures to protect listed plants from the effects of site-specific activities that will be implemented under the proposed action.

13. We recommend that BLM not dispose of land that contains occurrences, habitat, or potential habitat of listed plant species or other special status plant species.

14. We recommend that BLM actively pursue obtaining ownership of the habitat of listed and other sensitive plant species that exists on non-Federal lands in the project area. We recommend BLM work closely with us to identify and prioritize such lands.

15. We recommend new transportation routes in listed plant species habitat not be authorized. We also recommend that existing routes that are resulting in effects to the species be closed or routed away from the species.

16. We recommend installation of physical barriers or designation of parking areas that are necessary to keep vehicles from impacting listed plant species.

17. We recommend that range developments that attract and or concentrate cattle be located away from listed plant species habitat and occurrence.

18. We recommend installation of fences or development of other protective measures (e.g., herding) where cattle are attracted to concentrate in areas in listed plant species habitat.

19. We recommend developing or modifying listed plant species monitoring programs so that they are efficient and effective in achieving desired monitoring results.

20. We recommend conducting research to determine the actual effects of various actions on the plant community dynamics of listed plant species habitat.

21. We recommend that the BLM encourage seasonal restrictions (April 1 to September 30) on mining and other project operations within or adjacent to occupied SWWF breeding habitat, if these activities can disturb nesting birds. The need for this restriction will be assessed during the NEPA analysis and section 7 consultation conducted for the mining plan of operations.

22. We recommend working with Mohave County officials to establish a speed limit on county roads in desert tortoise habitat. Additionally, we recommend instituting a speed limit for grazing permittees during the desert tortoise active season (March 15-October 15) in DWMAs/ACECs.

In order for the USFWS to be kept informed of actions minimizing or avoiding adverse effects or benefiting listed species or their habitats, the USFWS requests notification of the implementation of any conservation recommendations.

APPENDIX C

ARIZONA STANDARDS AND GUIDELINES FOR LIVESTOCK GRAZING MANAGEMENT AND RANGELAND HEALTH IMPLEMENTATION STATUS

ARIZONA STANDARDS AND GUIDELINES FOR LIVESTOCK GRAZING MANAGEMENT

INTRODUCTION

The Department of the Interior's final rule for Grazing Administration, issued on February 22, 1995, and effective August 21, 1995, requires that Bureau of Land Management (BLM) State Directors develop State or regional standards and guidelines for grazing administration in consultation with BLM Resource Advisory Councils (RAC), other agencies and the public. The final rule provides that fallback standards and guidelines will be implemented, if State standards and guidelines are not developed by February 12, 1997. Arizona Standards and Guidelines and the final rule apply to grazing administration on public lands as indicated by the following quotation from the Federal Register, Volume 60, Number 35, page 9955.

> "The fundamentals of rangeland health, guiding principles for standards and the fallback standards address ecological components that are affected by all uses of public rangelands, not just livestock grazing. However, the scope of this final rule, and therefore the fundamentals of rangeland health of §4180.1, and the standards and guidelines to be made effective under §4180.2, are limited to grazing administration."

Although the process of developing standards and guidelines applies to grazing administration, present rangeland health is the result of the interaction of many factors in addition to livestock grazing. Other contributing factors may include, but are not limited to, past land uses, land use restrictions, recreation, wildlife, rights-of-way, wild horses and burros, mining, fire, weather, and insects and disease.

With BLM's commitment to ecosystem and interdisciplinary resource management, the standards for rangeland health, as developed in this current process, will be incorporated into management goals and objectives. The standards and guidelines for rangeland health for grazing administration, however, are not the only considerations in resolving resource issues.

The following quotations from the Federal Register, Vol. 60, No. 35, page 9956, February 22, 1995, describe the purpose of standards and guidelines and their implementation:

> "The guiding principles for standards and guidelines require that State or regional standards and guidelines address the basic components of healthy rangelands. The Department believes that by implementing grazing-related actions that are consistent with the fundamentals of §4180.1 and the guiding principles of §4180.2, the long-term health of public rangelands can be ensured.

Standards and guidelines will be implemented through terms and conditions of grazing permits, leases, and other authorizations, grazing-related portions of activity plans (including Allotment Management Plans), and through range improvement-related activities.

The Department anticipates that in most cases the standards and guidelines themselves will not be terms and conditions of various authorizations but that the terms and conditions will reflect the standards and guidelines.

The Department intends that assessments and corrective actions will be undertaken in priority order as determined by BLM.

"The Department will use a variety of data including monitoring records, assessments, and knowledge of the locale to assist in making the "significant progress" determination. It is anticipated that in many cases it will take numerous grazing seasons to determine direction and magnitude of trend. However, actions will be taken to establish significant progress toward conformance as soon as sufficient data are available to make informed changes in grazing practices."

FUNDAMENTALS AND DEFINITION OF RANGELAND HEALTH

The Grazing Administration Regulations, at §4180.1 (43 Code of Federal Regulation [CFR] 4180.1), Federal Register Vol. 60, No. 35, pg. 9970, direct that the authorized officer ensures that the following conditions of rangeland health exist:

(a) Watersheds are in, or are making significant progress toward, properly functioning physical condition, including their upland, riparian-wetland, and aquatic components; soil and plant conditions support infiltration, soil moisture storage, and the release of water that are in balance with climate and landform and maintain or improve water quality, water quantity, and timing and duration of flow.

(b) Ecological processes, including the hydrologic cycle, nutrient cycle, and energy flow, are maintained, or there is significant progress toward their attainment, in order to support healthy biotic populations and communities.

(c) Water quality complies with State water quality standards and achieves, or is making significant progress toward achieving, established BLM management objectives such as meeting wildlife needs.

(d) Habitats are, or are making significant progress toward being, restored or maintained for Federal threatened and endangered species, Federal Proposed, Category 1 and 2 Federal candidate and other special status species.

These fundamentals focus on sustaining productivity of a rangeland rather than its uses. Emphasizing the physical and biological functioning of ecosystems to determine rangeland health is consistent with the definition of rangeland health as proposed by the Committee on Rangeland Classification, Board of Agriculture, National Research Council (Rangeland Health, 1994, pg. 4 and 5). This Committee defined Rangeland Health ". . .as the degree to which the integrity of the soil and the ecological processes of rangeland ecosystems are sustained." This committee emphasized ". . .the degree of integrity of the soil and ecological processes that are most important in sustaining the capacity of rangelands to satisfy values and produce commodities." The Committee also recommended that, "The determination of whether a rangeland is healthy, at risk, or unhealthy should be based on the evaluation of three criteria: degree of soil stability and watershed function, integrity of nutrient cycles and energy flow, and presence of functioning mechanisms" (Rangeland Health, 1994, pg. 97-98).

Standards describe conditions necessary to encourage proper functioning of ecological processes on specific ecological sites. An ecological site is the logical and practical ecosystem unit upon which to base an interpretation of rangeland health. Ecological site is defined as:

". . . a kind of land with specific physical characteristics which differs from other kinds of land in its ability to produce distinctive kinds and amounts of vegetation and in its response to management" (Journal of Range Management, 48:279, 1995). Ecological sites result from the interaction of climate, soils, and landform (slope, topographic position). The importance of this concept is that the "health" of different kinds of rangeland must be judged by standards specific to the potential of the ecological site. Acceptable erosion rates, water quality, productivity of plants and animals, and other features are different on each ecological site.

Since there is wide variation of ecological sites in Arizona, standards and guidelines covering these sites must be general. To make standards and guidelines too specific will reduce the ability of BLM and interested publics to select specific objectives, monitoring strategies, and grazing permit terms and conditions appropriate to specific landforms.

Ecological sites have the potential to support several different plant communities. Existing communities are the result of the combination of historical and recent uses and natural events. Management actions may be used to modify plant communities on a site. The desired plant community for a site is defined as follows: "Of the several plant communities that may occupy a site, the one that has been identified through a management plan to best meet the plan's objectives for the site. It must protect the site at a minimum" (Journal of Range Management, 48:279, 1995).

Fundamentals (a) and (b) define physical and biological components of rangeland health and are consistent with the definition of rangeland health as defined by the Committee on Rangeland Classification, Board on Agriculture, National Research Council, as discussed in the paragraph above. These fundamentals provide the basis for sustainable rangelands.

Fundamentals (c) and (d) emphasize compliance with existing laws and regulation and, therefore, define social and political components of rangeland health. Compliance with Fundamentals (c) and (d) is accomplished by managing to attain a specific plant community and associated wildlife species present on ecological sites. These desired plant communities are determined in the BLM planning process, or, where the desired plant community is not identified, a community may be selected that will meet the conditions of Fundamentals (a) and (b) and also adhere to laws and regulations. Arizona Standard 3 is written to comply with Fundamentals (c) and (d) and provide a logical combination of Standards and Guidelines for planning and management purposes.

STANDARD AND GUIDELINE DEFINITIONS

Standards are goals for the desired condition of the biological and physical components and characteristics of rangelands. Standards:

(1) are measurable and attainable; and

(2) comply with various Federal and State statutes, policies, and directives applicable to BLM Rangelands.

Guidelines are management approaches, methods, and practices that are intended to achieve a standard. Guidelines:

(1) typically identify and prescribe methods of influencing or controlling specific public land uses;

(2) are developed and applied consistent with the desired condition and within site capability; and

(3) may be adjusted over time.

IMPLEMENTING STANDARDS AND GUIDELINES

The authorized officer will review existing permitted livestock use, allotment management plans, or other activity plans, which identify terms and conditions for management on public land. Existing management practices and levels of use on grazing allotments will be reviewed and evaluated on a priority basis to determine if they meet, or are making significant progress toward meeting, the standards and are in conformance with the guidelines. The review will be interdisciplinary and conducted under existing rules which provide for cooperation, coordination, and consultation with affected individuals, federal, state, and local agencies, tribal governments, private landowners, and interested publics.

This review will use a variety of data, including monitoring records, assessments, and knowledge of the locale to assist in making the significant progress determination. Significance will be determined on a case-by-case basis, considering site potential, site condition, weather and financial commitment. It is anticipated there will be cases where numerous years will be needed to determine direction and magnitude of trend.

Upon completion of review, the authorized officer shall take appropriate action as soon as practicable but no later than the start of the next grazing year upon determining that the existing grazing management practices or level of use on public land are significant factors contributing to failure to achieve the standards and conform with the guidelines that are made effective under 43 CFR 4180.2. Appropriate action means implementing actions that will result in significant progress toward fulfillment of the standards and significant progress toward conformance with guidelines.

Livestock grazing will continue where significant progress toward meeting standards is being made. Additional activities and practices will not be needed on such allotments. Where new activities or practices are required to assure significant progress toward meeting standards, livestock grazing use can continue contingent upon determinations from monitoring data that the implemented actions are effective in making significant progress toward meeting the standards. In some cases, additional action may be needed as determined by monitoring data over time.

New plans will incorporate an interdisciplinary team approach (Arizona BLM Interdisciplinary Resource Management Handbook, April 1995). The terms and conditions for permitted grazing in these areas will be developed to comply with the goals and objectives of these plans, which will be consistent with the standards and guidelines.

ARIZONA STANDARDS AND GUIDELINES

Arizona Standards and Guidelines (S&G) for grazing administration were developed through a collaborative process involving the Bureau of Land Management State S&G Team and the Arizona Resource Advisory Council. Together, through meetings, conference calls, correspondence, and Open Houses with the public, the BLM State Team and Arizona's Resource Advisory Council (RAC) prepared Standards and Guidelines to address the minimum requirements outlined in the grazing regulations. The Standards and Guidelines, criteria for meeting Standards, and indicators are an integrated document that conforms to the fundamentals of rangeland health and the requirements of the regulations when taken as a whole.

Upland sites, riparian-wetland areas, and desired resource conditions are each addressed by a standard and associated guideline.

Standard 1: Upland Sites

Upland soils exhibit infiltration, permeability, and erosion rates that are appropriate to soil type, climate and landform (ecological site).

Criteria for meeting Standard 1:

Soil conditions support proper functioning of hydrologic, energy, and nutrient cycles. Many factors interact to maintain stable soils and healthy soil conditions, including appropriate amounts of vegetative cover, litter, and soil porosity and organic matter. Under proper functioning conditions, rates of soil loss and infiltration are consistent with the potential of the site.

Ground cover in the form of plants, litter or rock is present in pattern, kind, and amount sufficient to prevent accelerated erosion for the ecological site; or ground cover is increasing as determined by monitoring over an established period of time.

Signs of accelerated erosion are minimal or diminishing for the ecological site as determined by monitoring over an established period of time.

As indicated by such factors as:

Ground Cover
- litter
- live vegetation, amount and type (e.g., grass, shrubs, trees, etc.)
- rock

Signs of erosion
- flow pattern
- gullies
- rills
- plant pedestaling

Exceptions and exemptions (where applicable):

None

Guidelines:

1-1. Management activities will maintain or promote ground cover that will provide for infiltration, permeability, soil moisture storage, and soil stability appropriate for the ecological sites within management units. The ground cover should maintain soil organisms and plants and

animals to support the hydrologic and nutrient cycles, and energy flow. Ground cover and signs of erosion are surrogate measures for hydrologic and nutrient cycles and energy flow.

1-2. When grazing practices alone are not likely to restore areas of low infiltration or permeability, land management treatments may be designed and implemented to attain improvement.

Standard 2: Riparian-Wetland Sites

Riparian-wetland areas are in properly functioning condition.

Criteria for meeting Standard 2:

Stream channel morphology and functions are appropriate for proper functioning condition for existing climate, landform, and channel reach characteristics. Riparian-wetland areas are functioning properly when adequate vegetation, landform, or large woody debris is present to dissipate stream energy associated with high water flows.

Riparian-wetland functioning condition assessments are based on examination of hydrologic, vegetative, soil and erosion-deposition factors. BLM has developed a standard checklist to address these factors and make functional assessments. Riparian-wetland areas are functioning properly as indicated by the results of the application of the appropriate checklist.

The checklist for riparian areas is in Technical Reference 1737-9 "Process for Assessing Proper Functioning Condition." The checklist for wetlands is in Technical Reference 1737-11 "Process for Assessing Proper Functioning Condition for Lentic Riparian-Wetland Areas." These checklists are reprinted on the pages following the Guidelines for Standard 3.

As indicated by such factors as:

Gradient
Width/depth ratio
Channel roughness and sinuosity of stream channel
Bank stabilization
Reduced erosion
Captured sediment
Ground-water recharge
Dissipation of energy by vegetation

Exceptions and exemptions (where applicable):

Dirt tanks, wells, and other water facilities constructed or placed at a location for the purpose of providing water for livestock and/or wildlife and which have not been determined through local planning efforts to provide for riparian or wetland habitat are exempt.

Water impoundments permitted for construction, mining, or other similar activities are exempt.

Guidelines:

2-1. Management practices maintain or promote sufficient vegetation to maintain, improve or restore riparian-wetland functions of energy dissipation, sediment capture, groundwater recharge and stream bank stability, thus promoting stream channel morphology (e.g., gradient, width/depth ratio, channel roughness and sinuosity) and functions appropriate to climate and landform.
2-2. New facilities are located away from riparian-wetland areas if they conflict with achieving or maintaining riparian-wetland function. Existing facilities are used in a way that does not conflict with riparian-wetland functions or are relocated or modified when incompatible with riparian-wetland functions.

2-3. The development of springs and seeps or other projects affecting water and associated resources shall be designed to protect ecological functions and processes.

Standard 3: Desired Resource Conditions

Productive and diverse upland and riparian-wetland plant communities of native species exist and are maintained.

Criteria for meeting Standard 3:

Upland and riparian-wetland plant communities meet desired plant community objectives. Plant community objectives are determined with consideration for all multiple uses. Objectives also address native species, and the requirements of the Taylor Grazing Act, Federal Land Policy and Management Act, Endangered Species Act, Clean Water Act, and appropriate laws, regulations, and policies.

Desired plant community objectives will be developed to assure that soil conditions and ecosystem function described in Standards 1 and 2 are met. They detail a site-specific plant community, which when obtained, will assure rangeland health, State water quality standards, and habitat for endangered, threatened, and sensitive species. Thus, desired plant community objectives will be used as an indicator of ecosystem function and rangeland health.

As indicated by such factors as:

Composition
Structure
Distribution

Exceptions and exemptions (where applicable):

Ecological sites or stream reaches on which a change in existing vegetation is physically, biologically, or economically impractical.

Guidelines:

3-1. The use and perpetuation of native species will be emphasized. However, when restoring or rehabilitating disturbed or degraded rangelands, non-intrusive, non-native plant species are appropriate for use where native species (a) are not available, (b) are not economically feasible, (c) cannot achieve ecological objectives as well as non-native species, and/or (d) cannot compete with already established non-native species.
3-2. Conservation of Federal threatened or endangered, proposed, candidate, and other special status species is promoted by the maintenance or restoration of their habitats.

3-3. Management practices maintain, restore, or enhance water quality in conformance with State or Federal standards.

3-4. Intensity, season and frequency of use, and distribution of grazing use should provide for growth and reproduction of those plant species needed to reach desired plant community objectives.

3-5. Grazing on designated ephemeral (annual and perennial) rangeland may be authorized if the following conditions are met:

ephemeral vegetation is present in draws, washes, and under shrubs and has grown to useable levels at the time grazing begins;

sufficient surface and subsurface soil moisture exists for continued plant growth;

serviceable waters are capable of providing for proper grazing distribution;

sufficient annual vegetation will remain on site to satisfy other resource concerns, (i.e., watershed, wildlife, wild horses and burros); and

monitoring is conducted during grazing to determine if objectives are being met.

3-6. Management practices will target those populations of noxious weeds that can be controlled or eliminated by approved methods.

3-7. Management practices to achieve desired plant communities will consider protection and conservation of known cultural resources, including historical sites, and prehistoric sites and plants of significance to Native American peoples.

STANDARDS AND GUIDELINES ON THE ARIZONA STRIP DISTRICT

The Standards were written by RAC in 1997. They were accepted and approved that same year by the Secretary of the Interior. The Guidelines apply only to authorized livestock grazing activities, the Standards apply to all programs and all authorized activities. Two teams implement the Standards on all grazing allotments on the Arizona Strip. The Interdisciplinary Assessment Team (IAT) is made up of resource specialists from the BLM, Arizona Game and Fish Department (AGFD), the Natural Resources Conservation Service and Mohave County Extension Agency. This team carries out the assessment. The Arizona Resource Advisory Council appointed a nine member Rangeland Resource Team (RRT), to be involved in the process from beginning to end.

- The RRT is constructed similar to the RAC with 3 representatives in each of 3 diverse groups:
    1. Commodities: Livestock Grazing, Mining, Commercial Recreation
    2. Non-Commodities: Wildlife, Environmental, Dispersed Recreation
    3. Local Area Interest: Public-at-large, Native American Interests, Elected Officials
- The RRT has 2 objectives:
    1. Ensure the Standards are consistently applied across allotment boundaries, and
    2. Ensure determinations are based on something…, monitoring data, professional opinion.

    There is a list of members on both teams below.

Each year letters are sent to approximately 700 individuals notifying them which grazing allotments are to be evaluated in the upcoming fiscal year. The recipient is then instructed how to request designation as an "Interested Public" and be involved in the evaluation and decision making process.

BLM grazing regulations at 43 CFR 4100.0-5 state "Interested public means an individual, group or organization that has **submitted a written request** to the authorized officer to be provided an opportunity to be involved in the decision making process for the management of livestock

grazing on **specific grazing allotments** or has submitted written comments to the authorized officer regarding the management of livestock grazing on a specific allotment"(emphasis added).

The Arizona Strip District holds an issue scoping meeting once a year, where all issues raised are documented as either relating, or not relating, to rangeland health. During the year each allotment with issues that relate to rangeland health is visited, after assembling all available information and monitoring data. Both teams visit sites representing each issue and the IAT determines, by consensus, whether the area is meeting standards. The interested public is invited to the scoping meetings and the field visits. If an area does not meet the standards, the cause is determined and recommendations are made to improve the situation. If the current livestock grazing practices are determined to be the cause of non-attainment, BLM regulations (43 CFR 4180.1) require the modification of the practices by the next grazing season.

The IAT then produces a report documenting the results of the evaluation. The S&G report is sent to the RAC, the RRT, State Agencies having lands or managing resources within the area, and the Interested Public. Any comments received are used in the preparation of an Environmental Assessment for renewing the ten-year grazing permit. A Grazing Decision is then issued to the Permittee, State Agencies having lands or managing resources within the area, and the Interested Public. This grazing decision outlines the terms and conditions of the grazing permit and may be protested or appealed by any or all recipients.

RANGELAND HEALTH IMPLEMENTATION STATUS

Standards for Rangeland Health
Evaluation Results and Evaluation Schedule

Grand Canyon-Parashant National Monument (AZ130)

Allotment Name	Allotment Number	Evaluation Result or FY Scheduled
Belnap	04849	Meeting the Standards
Belnap West	04822	Meeting the Standards
Big Spring Pipeline	04870	Progressing Towards Meeting
Cottonwood	04809	Evaluation in Draft
Duncan Tank	04820	Meeting the Standards
Hidden Hills	04825	2008
Hidden Spring	04803	Evaluation in Draft
Imlay	04817	Progressing Towards Meeting
Jump Canyon	04801	Progressing Towards Meeting
Last Chance	04815	Progressing Towards Meeting
Link Spring	04819	Progressing Towards Meeting
Mosby	04835	2008
Mosby-Nay	04836	Progressing Towards Meeting
Mt Trumbull	04826	Meeting the Standards
Mt. Logan	05218	Meeting the Standards
Mud and Cane Spring	04850	Evaluation in Draft
Pakoon	04802	2008
Pakoon Springs	04800	2008
Penns Well	04852	Meeting the Standards
Red Pond	04806	Progressing Towards Meeting
Sullivan Tank	04816	Progressing Towards Meeting
Tuweep	05220	Progressing Towards Meeting
Wildcat	04854	Progressing Towards Meeting

APPENDIX D

LIVESTOCK GRAZING
ALLOTMENT MANAGEMENT STATUS

APPENDIX D: LIVESTOCK GRAZING ALLOTMENT MANAGEMENT STATUS

Resource Area: Grand Canyon *Parashant NM*

Allotment Name	Allotment Number	Management Status[2]	AMP[3]	Current Mgt
Belnap	04849	I		Summer
Belnap West	04822	M		Winter
Big Spring Pipeline	04870	M	A	Deferred
Cottonwood	04809	I	A	Deferred
Dripping Spring	04818	M	A	Winter Spring
Duncan Tank	04820	M	A	Deferred
Hidden Hills	04825	I	A	Summer & Fall
Hidden Spring	04803	I		Season Long
Imlay	04817	I	A	Winter Spring
Jump Canyon	04801	I	A	Winter Spring
Last Chance	04815	M	A	Deferred
Link Spring	04819	I	A	Deferred
Mosby	04835	M	A	Deferred
Mosby-Nay	04836	I		Deferred
Mt Trumbull	04826	M	A	Deferred
Mt. Logan	05218	I	A	Deferred
Mud and Cane Spring	04850	I	A	Deferred
Mule Canyon	04821	M	A	Deferred
Pakoon	04802	M	A	Winter Spring
Pakoon Springs	04800	I		Season Long
Parashaunt AMP	04829	M	A	Forage Reserve
Pa's Pocket	04848	I	A	Winter Spring
Penns Well	04852	M	A	Rest-Rotation
Red Pond	04806	M	A	Deferred
Sullivan Tank	04816	M	A	Deferred
Tuweep	05220	I	A	Rest-Rotation
Wildcat	04854	I	A	Deferred

[2] Management Status equates to the category that the allotment has been placed in reference to management intensity: I=Improve, M=Maintain, C=Custodial (See details below)

[3] Under the AMP label A= AMP developed, C=Coordinated management plan developed.

ALLOTMENT CATEGORIZATION CRITERIA

Maintain (M)

(a) Present range condition is satisfactory.

(b) Allotments have high or moderate resource potential and are producing near their potential (or trend is moving in that direction.)

(c) No serious resource-use conflicts/controversy exist.

(d) Opportunities may exist for positive economic return from public investments.

(e) Present management is satisfactory.

(f) Other criteria appropriate to the Environmental Statement (ES) area.

Improve (I)

(a) Present range condition is unsatisfactory.

(b) Allotments have high to moderate resource production potential and are producing at low to moderate levels.

(c) Serious resource-use conflicts/controversy exists.

(d) Opportunities exist for positive economic return from public investments.

(e) Present management appears unsatisfactory.

(f) Other criteria appropriate to the ES area.

Custodial (C)

(a) Present range condition is not a paramount factor.

(b) Allotments have low resource production potential, and are producing near their potential.

(c) Limited resource-use conflicts/controversy may exist.

(d) Opportunities for positive economic return on public investment do not exist or are constrained by technological or economic factors.

(e) Present management appears satisfactory or is the only logical practice under existing resource conditions or land ownership pattern.

(f) Other criteria appropriate to the ES area.

APPENDIX E

LIVESTOCK GRAZING ALLOTMENT ACRES AND ANIMAL UNIT MONTHS (AUMs) BY LAND STATUS

APPENDIX E: LIVESTOCK GRAZING ALLOTMENT ACRES AND ANIMAL UNIT MONTHS (AUMS) BY LAND STATUS

Table E.1. Allotment Acres by Land Status for Grand Canyon-Parashant National Monument

Allotment	Allotment Number	State Acres	Private Acres	Other Federal Acres	Public Acres
Belnap	04849	640	1,550		7,279
Belnap West	04822		120		4,317
Big Spring Pipeline	04870	1,280	280	13,680	36,790
Cottonwood	04809				33,129
Dripping Spring	04818			9,774	1,290
Duncan Tank	04820	1,220	2,168		6,250
Hidden Hills	04825	3,428			45,999
Hidden Spring	04803	565			18,642
Imlay	04817	320			15,534
Jump Canyon	04801	1,840			26,108
Last Chance	04815	640			9,072
Link Spring	04819	320			27,689
Mosby	04835	434			1,136
Mosby-Nay	04836	1,847			29,107
Mt Trumbull	04826	2,000	2,240	15,817	13,210
Mt. Logan	05218	1,120			18,996
Mud and Cane Spring	04850	1,921			81,910
Mule Canyon	04821			15,133	1,291
Pakoon	04802	280			55,938
Pakoon Springs	04800	648	240		36,466
Parashaunt AMP	04829				52,923
Pa's Pocket	04848	606			8,087
Penns Well	04852	640	620		4,225
Red Pond	04806	1,670	80	11,302	51,461
Sullivan Tank	04816				13,392
Tuweep	05220	2,799			41,650
Wildcat	04854	2,562	5,341		87,159
Summary (28 detail records)		**27,380**	**12,802**	**65,706**	**791,017**

Table E.2 Allotment AUMs by Land Status for Grand Canyon-Parashant National Monument					
Allotment Name	**Allotment Number**	**State AUMs**	**Private AUMs**	**Other Federal AUMs**	**Public AUMs**
Belnap	4849	72	19		534
Belnap West	4822		23		204
Big Spring Pipeline	4870	216	16	689	1,721
Cottonwood	4809				1,867
Dripping Spring	4818			420	28
Duncan Tank	4820	120	282		429
Hidden Hills	4825	172			1,907
Hidden Spring	4803	48			1,256
Imlay	4817	36			734
Jump Canyon	4801	175			1,863
Last Chance	4815	94			609
Link Spring	4819	42			1,094
Mosby	4835	48			81
Mosby-Nay	4836	96			1,148
Mt Trumbull	4826	187	80	445	1,113
Mt. Logan	5218	126			930
Mud and Cane Spring	4850	108			4,716
Mule Canyon	4821			433	152
Pakoon	4802	18			1,624
Pakoon Springs	4800	48	6		1,394
Parashaunt AMP	4829				2,308
Pa's Pocket	4848	62		479	479
Penns Well	4852	84	69		299
Red Pond	4806				2,793
Sullivan Tank	4816				456
Tuweep	5220	173			1,785
Wildcat	4854	288	575		4,593
Summary (28 detail records)		**2,213**	**1,070**	**1,987**	**36,117**

APPENDIX F

VEGETATION TREATMENT TOOLS AND METHODS

APPENDIX F: VEGETATION TREATMENT TOOLS AND METHODS

This appendix briefly describes a variety of vegetation treatment tools and methods that may be used in the Monument. Included are recommendations for uses of various tools and methods, as well as advantages and disadvantages of each.

Manual

In manual treatments, plants are cut at or above ground level; plant root systems are pulled or dug out to prevent subsequent sprouting and regrowth; or mulch is placed around desired vegetation to limit the growth of competing vegetation. Hand tools and hand-operated power tools are used in manual vegetation treatments to cut, clear, or prune herbaceous and woody species. Hand tools such as the handsaw, axe, shovel, rake, machete, grubbing hoe, mattock (combination of axe and grubbing hoe), brush hook, and hand clippers, etc. are used in manual treatments. Axes, shovels, grubbing hoes, and mattocks can dig up and cut below the surface to remove the main root of plants such as prickly pear and mesquite with roots that can quickly resprout in response to surface cutting or clearing. Power tools, such as chain saws and power brush saws, are used to sever the main stem of woody vegetation at or near ground level.

The advantage of manual treatments is that they are species and individual plant specific, can be used in sensitive habitats, and can be used in areas inaccessible for mechanical treatments. The disadvantage is that they are labor intensive and, therefore, expensive.

Mechanical

Mechanical treatments are used to kill or reduce the cover of undesirable vegetation and thus encourage the growth of desirable vegetation. Several different types of mechanical equipment are effective in suppressing, inhibiting, or controlling herbaceous and woody vegetation (Vallentine 1980). Equipment could include wheeled or track type tractors, mowers, shredders, ATV's or specially designed vehicles with attached implements for mechanical vegetation treatments. The best mechanical method for treating undesired plants in a particular location depends on the following factors:

1. Characteristics of the undesired species present such as plant density stem size, woodiness, brittleness, and re-sprouting ability;
2. Need for seedbed preparation and/or re-vegetation,
3. Need to reduce erosion and improve effective ground cover,
4. Soil characteristics such as type, depth, amount and size of rocks, erosion potential, and susceptibility to compaction;
5. Climatic and seasonal conditions,
6. Topography and terrain,
7. Potential cost of project compared to expected results, and
8. Vegetation type.

Wheeled or crawler tractors can uproot and/or push vegetation over (bulldozing) with a heavy, hydraulic controlled blade. Vegetation is either left scattered or pushed into windrows or piles. There are several different kinds of blades available, depending of the type of vegetation and goals of the project. Bulldozing is most effective in removing scattered large brush or trees. Soil disturbance is a disadvantage of bulldozing.

Disk plowing in various forms can be used for removing shallow-rooted herbaceous and woody plants. Several different kinds of root plows are specific for certain types of vegetation. In addition to killing vegetation, disk plowing is effective in loosening the soil surface to prepare it for seeding and to improve the rate of water infiltration. The disadvantages of disk plowing are that it disturbs the soil and provides an opportunity for an increase in invasive non-native plants, it usually kills all species, and it may be expensive. Also, plowing is usually not practical on steep (greater than a 35% to 45% slope) or rocky slopes. Plant species that sprout from roots may survive.

Various tractor attachments are used for mowing, beating, crushing, chopping, or shredding vegetation depending on the nature of the vegetation and goals of the project. Mowing is effective in reducing plant height and usually does not kill vegetation. Mowing is more effective on herbaceous than woody vegetation. On the other hand, a rolling cutter may kill woody non-sprouting vegetation by breaking stems at ground level but leaving herbaceous vegetation. Generally, mowing, beating, crushing, chopping, or shredding disturbs the soil surface minimally. Rocky soil and steep slopes may limit use of this type of equipment. The advantage of using this type of equipment is that selective plants may be targeted to achieve specific goals.

Chaining and cabling are used to remove non-sprouting woody vegetation such as small trees and shrubs by pulling them over. Vegetation removal is accomplished by dragging heavy anchor chains or steel cables, hooked behind two tractors, in a U-shaped manner. Vegetation is either left scattered or pushed into windrows or piles. The chains or cables can also be used to prepare the soil surface for seeding desirable species and to cover seed with soil to improve germination. Although herbaceous vegetation is not normally injured during the treatment, desirable shrubs may be damaged. The disadvantage of this treatment is soil disturbance and that non-desirable "weedy" herbaceous vegetation can survive this treatment. This vegetation treatment method is cost effective as large areas can be readily treated.

Chemical

Until the Draft Progammatic EIS on Vegetation Treatments Using Herbicides on BLM Lands in 17 Western States (2005) is final, the BLM will use EPA-approved herbicides in accordance with EPA's Endangered Species Pesticide Program covered in the BLM's *Vegetation Treatment on BLM Lands in Thirteen Western States FEIS* (May 1991) and to those approved for use by the Arizona Record of Decision (ROD, Page 3, July 1991). These herbicides are: Atrazine; Bromacil; Bromacil + Diuron; Chlorsulfuron; Clopyralid; 2,4-D, Dicamba; Dicamba + 2,4-D; Diuron; Glyphosate; Glyphosate + 2,4-D; Hexazinone; Imazapyr; Mefluidide; Metsulfuron Methyl; Picloram; Picloram + 2,4-D; Simazine; Sulfometuron Methyl; Tebuthiuron; and Triclopyr as listed on pages 1-19 through 1-32 and project design features listed on pages 1-33 through 1-37 of the FEIS. Once the ROD for this RMP is signed, the BLM will adhere to the standards and guidelines for each approved herbicide set forth in the Programmatic EIS on *Vegetation Treatment on BLM Lands in Thirteen Western States*.

Herbicide applications are designed to minimize potential impacts on non-target plants and animals, while achieving the objective of the vegetation treatment project. The rates of application depend on the target species, presence and condition of non-target vegetation, soil type, depth to the water table, presence of other water sources, and the requirements of the label. In many circumstances the herbicide chosen, time of treatment, and rate of application of the herbicide is different than the most ideal herbicide application for maximum control of the target plant species in order to minimize damage to the non-target plant species, and to ensure minimum risk to human health and safety.

The herbicides may be applied aerially with helicopters or fixed-wing aircraft, or on the ground using vehicles or manual application devices. Helicopters are more expensive than fixed-wing aircraft, but they are more effective in irregular terrain and in treating specific target vegetation in areas with many vegetation types. Manual applications are generally used for treating small areas or those inaccessible by vehicle.

The BLM will work closely with the U.S. Fish and Wildlife Service (USFWS) to ensure that herbicide applications will not affect listed or proposed threatened or endangered species on a project-level basis. If adverse effects are anticipated during informal consultation, then the BLM will formally consult on these projects. If the USFWS develops herbicide guidance for particular species that improves protection beyond the current BLM design features, the BLM will consider and incorporate that guidance as it consults with the USFWS on a project-level basis. In order to protect listed, proposed, and candidate species, buffer strips may be used.

Project design features may include buffer strips described in the *Vegetation Treatment on BLM Lands in Thirteen Western States Programmatic EIS* ROD (page 10), as follows: "Buffer strips will be used adjacent to dwellings, domestic water sources, agriculture land, streams, lakes, and ponds. A minimum buffer strip 100 feet wide will be provided for aerial application, 25 feet for vehicle application and 10 feet for hand application. Any deviations must be in accordance with the label for the herbicide. Herbicides could be wiped on individual plants within 10 feet of water where application is critical." It should be noted that the Draft Vegetation Management EIS contains herbicides approved for application over water, and therefore, buffer strips may not always be necessary, once the FEIS is approved.

The chemicals can be applied by many different methods and the selected technique depends on a number of variables. Some of these are:

1. treatment objective (removal or reduction);
2. accessibility, topography, and size of the treatment area;
3. characteristics of the target species and the desired vegetation;
4. location of sensitive areas in the immediate vicinity (potential environmental impacts);
5. anticipated costs and equipment limitations; and
6. meteorological and vegetative conditions of the treatment area at the time of treatment.

The changes made here are not consistent with the format of the numbered items under the "Mechanical Section." Chemical treatments are generally cost effective and can be species specific. The disadvantages are they are not always species specific and precautions may need to be taken to ensure attainment of treatment objectives.

Biological

Biological control (biocontrol) is the intentional use of living organisms to reduce the population of a pest. It may include the use of insects, nematodes, mite, plant pathogens, and vertebrates. The majority of the noxious weeds in the United States are introduced without their natural enemies. Biocontrol seeks to use some of the native land's biotic factors to suppress populations of these undesirable plants. (Biological Control of Weeds in the West, Western Society of Weed Management, 1996). The eventual impacts of a biocontrol agent on its target plant will be the result of the:

1. density of weeds compared to the density of the agent;
2. effect of the local biotic and abiotic conditions on the agent and on the weed;
3. plant's reproductive ability (seeds only or seeds and vegetative reproduction);
4. agent's ability to stress the plant each year and the plant's ability to maintain and replace root reserves;
5. plant's ability to recover from the effects of the biocontrol agent, and;
6. interactions of multiple biocontrol agents attacking a single weed species.

The changes made here are not consistent with the format of the numbered items under the "Mechanical Section."

The advantages of biocontrol:

1. Once a biocontrol agent becomes established it usually will reproduce, increase its numbers, and continue to attack the target organism, generally without additional costs to the land manager.
2. Biocontrol agents move to host plants anywhere within their climatic range, readily crossing ownership boundaries and some geographical barriers.
3. Approved biocontrol agents are selective – host weeds are attacked without damage to the surrounding vegetation.
4. Properly tested biocontrol agents are not a source of environmental contamination.

The disadvantages of biocontrol:

1. It often takes many years for the populations of the introduced agents to increase to levels that permanently decrease the pest plant population.
2. Some biocontrol agents may be subject to predators.
3. Environmental conditions (shade versus sun, low versus high rainfall, sandy versus clay soils) often exclude some biocontrol agents from certain locations.
4. Biocontrol agents usually do not eradicate weed populations.

Cattle, sheep, and goats are domestic animals that can be used as biological agents to control the top growth of certain noxious weeds. The use of grazing as a biological control agent will be conducted in accordance with BLM procedures in the Use of Biological Control Agents of Pests on Public Lands (BLM 1990). The following are some advantages of using domestic animals, mainly sheep or goats, for noxious weed control.

1. They use weeds as a food source.
2. Following a brief adjustment period, they sometimes consume as much as 50 percent of their daily diet of targeted species.
3. Sheep or goats can be used in combination with herbicides.

Some of the disadvantages of using domestic animals are:

1. They also use non-target plants as food sources.
2. The use of domestic animals, like sheep or goats, requires a herder or temporary fencing.
3. The animals may be killed by predators such as coyotes.
4. Most weed species are less palatable than desirable vegetation.
5. They may accelerate movement of nonnative plants through seed ingestion and excretion.
6. They control few, if any, plant species.
7. Domestic livestock may transmit parasites and/or pathogens to resident native wildlife species.

Wildland Fire Use and Prescribed Fire

Wildland Fire Use

Wildland fire use is wildland fire used to protect, maintain, and enhance resources and, when possible, allowed to function in its natural ecological role. Use of fire will be based on approved Fire Management Plans and will follow specific prescriptions contained in operational plans.

The Interagency Standards for Fire and Fire Aviation Operations (2004) will be followed. It includes the following incident management guidance for wildland fire use:

1. Agencies may apply this strategy in managing wildland fires for resource benefit.
2. An approved Fire Management Plan (FMP) is required. This plan identifies specific resource and fire management objectives, a predefined geographic area, and prescriptive criteria that must be met.
3. A Wildland Fire Implementation Plan (WFIP) will be completed for all wildland fires that are managed for resource benefit. This is an operational plan for assessing, analyzing, and selecting strategies for wildland fire use. It is progressively developed and documents appropriate management responses for any wildland fire managed for resource benefits. The plan will be completed in compliance with the guidance found in the Wildland and Prescribed Fire Management Policy Implementation Procedures Reference Guide (August 1998).
4. Monitoring and Evaluation includes assessment and long term monitoring of the fire treatment to ensure the prescribed fire has met the objectives of the approved prescribed fire plan.

Prescribed Fire

Prescribed fire is the planned application of fire to vegetation, under specific conditions of fuels, weather, and other variables, to ensure the fire remains in a predetermined area and achieves site-specific resource management objectives. Prescribed fire treatments will be implemented in accordance with BLM procedures in Fire Planning (BLM 1987c), Prescribed Fire Management (BLM 1988b), and Fire Training and Qualifications (BLM 1987d).

Prior to conducting a prescribed burn, a written plan must be prepared that takes into consideration existing conditions (amount of fuel, fuel moisture, temperatures, terrain, weather forecasts, etc.) and identifies people responsible for overseeing the fire.

Seeding

Following vegetation management treatments, seed may be applied. All seed will be tested and "state certified" free of weed seeds. Seed priming, covering, and other enhancement techniques may be used to increase germination rates. Seeding encourages development of a desired plant community, mitigates erosion, establishes effective ground cover, and/or encourages development of desirable wildlife habitat attributes. The disadvantages of seeding are that acquiring and applying seed is expensive and germination is not always successful.

NPS Vegetation Treatment Tools and Methods

On NPS-administered lands, individual restoration plans will be prepared, and compliance conducted, for each restoration project. Tools that may be considered include;

1. Manual – as written for BLM lands, including chain saws and power brush saws.
2. Chemical – as written for BLM lands, except NPS will use EPA and NPS approved pesticides in accordance with NPS Integrated Pest Management (IPM) Policy and Guidelines.
3. Biological – as written for BLM lands, except the use of cattle, sheep, and goats. NPS use will be in accordance with NPS IPM Policy and Guidelines.
4. Fire – as written for BLM lands, except in accordance with NPS policies.
5. Seeding – As written for BLM, except only native species will be applied to NPS lands in accordance with NPS policies.
6. Mechanical -- As written for BLM, except no disk plowing, chaining or cabling will be used on NPS lands. Appropriateness of the tool and method may be required on a project-to-project basis.

All treatments will be consistent with NPS laws, regulations, and policies. The minimum requirement process will be conducted for administrative activities on NPS proposed wilderness.

APPENDIX G

CONSERVATION MEASURES FOR SPECIAL STATUS SPECIES

APPENDIX G: CONSERVATION MEASURES FOR SPECIAL STATUS SPECIES

The following Conservation Measures will be implemented as part of the proposed action for all management activities authorized. These Conservation Measures are intended to provide District-wide consistency in reducing or eliminating the effects of management actions on federally endangered, threatened, proposed, and candidate species, as well as species included on the Wildlife Species of Concern in Arizona and BLM Arizona Sensitive Species lists.

1.0 CONSERVATION MEASURES FOR FIRE MANAGEMENT ACTIVITIES

1.1 WILDLAND FIRE SUPPRESSION (FS)

The following Conservation Measures will be implemented during fire suppression operations, unless firefighter or public safety, or the protection of property, improvements, or natural resources, render them infeasible during a particular operation. Each Conservation Measure has been given an alphanumerical designation for organizational purposes (*e.g.*, FS-1). Necessary modifications of the Conservation Measures or impacts to federally protected species and habitat during fire suppression operations will be documented by the Resource Advisor, and coordinated with the U.S. Fish and Wildlife Service (USFWS).

FS-1 Protect known locations of habitat occupied by federally listed species. Minimum Impact Suppression Tactics (MIST) will be followed in all areas with known federally protected species or habitat.

FS-2 Resource Advisors will be designated to coordinate natural resource concerns, including federally protected species. They will also serve as a field contact representative (FCR) responsible for coordination with the USFWS. Duties will include identifying protective measures endorsed by the Field Office Manager, and delivering these measures to the Incident Commander; surveying prospective campsites, aircraft landing and fueling sites; and performing other duties necessary to ensure adverse effects to federally protected species and their habitats are minimized. On-the-ground monitors will be designated and used when fire suppression activities occur within identified occupied or suitable habitat for federally protected species.

FS-3 All personnel on the fire (firefighters and support personnel) will be briefed and educated by Resource Advisors or designated supervisors about listed species and the importance of minimizing impacts to individuals and their habitats. All personnel will be informed of the conservation measures designed to minimize or eliminate take of the species present. This information is best identified in the incident objectives.

FS-4 Permanent road construction will not be permitted during fire suppression activities in habitat occupied by federally protected species. Construction of temporary roads is

approved only if necessary for safety or the protection of property or resources, including federally protected species habitat. Temporary road construction should be coordinated with the USFWS, through the Resource Advisor.

FS-5 Crew camps, equipment staging areas, and aircraft landing and fueling areas should be located outside of listed species habitats, and preferably in locations that are disturbed. If camps must be located in listed species habitat, the Resource Advisor will be consulted to ensure habitat damage and other effects to listed species are minimized and documented. The Resource Advisor should also consider the potential for indirect effects to listed species or their habitat from the siting of camps and staging areas (*e.g.*, if an area is within the water flow pattern, there may be indirect effects to aquatic habitat or species located off-site).

FS-6 All fire management protocols to protect federally protected species will be coordinated with local fire suppression agencies that conduct fire suppression on BLM-administered lands to ensure that the agency knows how to minimize impacts to federally protected species in the area.

FS-7 The effectiveness of fire suppression activities and Conservation Measures for federally protected species should be evaluated after a fire, when practical, and the results shared with the USFWS and AGFD. Revise future fire suppression plans and tactical applications as needed and as practical.

1.2 FUELS TREATMENTS, PRESCRIBED BURNING AND OTHER FUELS MANAGEMENT ACTIONS (FT)

The following Conservation Measures are mandatory when implementing wildland fire use, prescribed fires, and proposed vegetation treatments using mechanical, chemical, and/or biological treatment methods:

FT-1 Biologists will be involved in the development of prescribed burn plans and vegetation treatment plans to minimize effects to federally protected species and their habitats within, adjacent to, and downstream from proposed project sites. Biologists will consider the protection of seasonal and spatial needs of federally protected species (*e.g.*, avoiding or protecting important use areas or structures and maintaining adequate patches of key habitat components) during project planning and implementation.

FT-2 MIST will be followed in all areas with known federally protected species or habitats.

FT-3 Pre-project surveys and clearances (biological evaluations/assessments) for federally protected species will be required for each project site before implementation. All applicable Conservation Measures will be applied to areas with unsurveyed suitable habitat for federally protected species, until a survey has been conducted by qualified personnel to clear the area for the treatment activity.

FT-4 Use of motorized vehicles during prescribed burns or other fuels treatment activities in suitable or occupied habitat will be restricted, to the extent feasible, to existing roads, trails, washes, and temporary fuel breaks or site-access routes. If off-road travel is

deemed necessary, any cross-country travel paths will be surveyed prior to use and will be closed and rehabilitated after the prescribed burn or fuels treatment project is completed.

FT-5 As part of the mandatory fire briefing held prior to prescribed burning, all personnel (firefighters and support personnel) will be briefed and educated by Resource Advisors or designated supervisors about listed species and the importance of minimizing impacts to individuals and their habitats. All personnel will be informed of the Conservation Measures designed to minimize or eliminate take of the species present.

1.3 REHABILITATION AND RESTORATION (RR)

RR-1 When rehabilitating important areas for federally listed species that have been damaged by fire or other fuels treatments, the biologist will give careful consideration to minimizing short-term and long-term impacts. Someone who is familiar with fire impacts and the needs of the affected species will contribute to rehabilitation plan development. Appropriate timing of rehabilitation and spatial needs of federally listed species will be addressed in rehabilitation plans.

RR-2 Seed from regionally native or sterile alien (non-native) species of grasses and herbaceous vegetation will be used in areas where reseeding is necessary following ground disturbance to stabilize soils and prevent erosion by both wind and water.

RR-3 Sediment traps or other erosion control methods will be used to reduce or eliminate influx of ash and sediment into aquatic systems.

RR-4 Use of motorized vehicles during rehabilitation or restoration activities in suitable or occupied habitat will be restricted, to the extent feasible, to existing roads, trails, or washes, and to temporary access roads or fuel breaks created to enable the fire suppression, prescribed burn, or fuels treatment activities to occur. If off-road travel is deemed necessary, any cross-country travel paths will be surveyed prior to use and will be closed and rehabilitated after rehabilitation or restoration activities are completed.

RR-5 All temporary roads, vehicle tracks, skid trails, and off-road vehicle (ORV) trails resulting from fire suppression and the proposed fire management activities be rehabilitated (water bars, etc.), and be closed or made impassible for future use.

RR-6 Burned area emergency rehabilitation (BAER) activities and long-term restoration activities should be monitored, and the results provided to the USFWS and AGFD. Section 7 consultation for BAER activities will be conducted independently, if necessary.

RR-7 **(Recommended)** Develop public education plans that discourage or restrict fires and fire-prone recreation uses during high fire-risk periods. Develop brochures, signs, and other interpretive materials to educate recreationists about the ecological role of fires, and the potential dangers of accidental fires.

1.4 CONSERVATION MEASURES FOR FIRE MANAGEMENT ACTIVITIES IN RIPARIAN AND AQUATIC HABITATS (RA)

The following Conservation Measures be implemented during fire suppression and fuels treatment operations in riparian, wetland, or aquatic habitats, unless firefighter or public safety, or the protection of property, improvements, or natural resources, render them infeasible during a particular operation. Fuels treatment activities include prescribed fire and mechanical, chemical, and/or biological vegetation treatments in riparian, wetland, and aquatic habitats. Necessary modifications of the Conservation Measures or impacts to federally protected species and habitat during fire suppression operations will be documented by the Resource Advisor, and coordinated with the USFWS.

RA-1 During wildfire suppression, apply MIST within riparian areas. Fire suppression actions in riparian areas should be prioritized to minimize damage to stands of native vegetation from wildfire or suppression operations. To the extent possible, retain large, downed woody materials and snags that are not a hazard to firefighters.

RA-2 Fire suppression and rehabilitation in riparian corridors will be coordinated with the Resource Advisor or qualified biologist approved by BLM.

RA-3 Site-specific implementation plans that include project areas with federally protected aquatic or riparian-obligate species will specify fire management objectives and wildland fire suppression guidance, taking into account the special concerns related to these species.

RA-4 In riparian areas, use natural barriers or openings in riparian vegetation where possible as the easiest, safest method to manage a riparian wildfire. Where possible and practical, use wet firebreaks in sandy overflow channels rather than constructing firelines by hand or with heavy equipment.

RA-5 Construction or development of a crossing for motorized vehicles across a perennial stream will not be permitted, unless an established road already exists or where dry, intermittent sections occur.

RA-6 Avoid the use of fire retardants or chemical foams in riparian habitats or within 300 feet of aquatic habitats, particularly sites occupied by federally protected species. Apply operational guidelines as stated in the *Interagency Standards for Fire and Fire Aviation Operations 2003 (or updates),* "Environmental Guidelines for Delivery of Retardant or Foam Near Waterways."

RA-7 Priority for placement of fire camps, fire staging areas, and aircraft landing or refueling sites will be outside riparian areas or river/stream corridors.

RA-8 When using water from sources supporting federally protected species, care must be taken to ensure adverse impacts to these species are minimized or prevented. Unused water from fire abatement activities will not be dumped in sites occupied by Federally protected aquatic species to avoid introducing non-native species, diseases, or parasites.

RA-9 If water is drafted from a stock tank or other body of water for fire suppression, it will not be refilled with water from another tank, lakes, or other water sources that may support non-native fishes, bullfrogs, crayfish, or salamanders.

RA-10 Use of containment systems for portable pumps to avoid fuel spills in riparian or aquatic systems will be required.

RA-11 (Recommended) Develop and implement restoration plans for affected riparian or aquatic areas, including long-term monitoring, to document changes in conditions in the riparian zone and watershed that maintain flood regimes and reduce fire susceptibility. Monitor stream water quality and riparian ecosystem health to determine effects of wildfire and fire management activities. Coordinate efforts and results with the USFWS and AGFD.

RA-12 Fire management treatments within or adjacent to riparian and aquatic habitats be designed to provide long-term benefits to aquatic and riparian resources by reducing threats associated with dewatering and surface disturbance, or by improving the condition of the watershed and enhancing watershed function.

RA-13 For priority fire/fuels management areas (e.g., wildlife-urban interface (WUI) areas) with federally protected species or designated critical habitat downstream, BLM biologists and other resource specialists, as appropriate, in coordination with USFWS and AGFD, determine:

A) The number of acres and the number of projects or phases of projects to occur within one watershed per year.

B) An appropriately-sized buffer adjacent to perennial streams in order to minimize soil and ash from entering the stream.

C) Where livestock grazing occurs in areas that have been burned, specialists will determine when grazing can be resumed. Such deferments from grazing will only occur when necessary to protect streams from increased ash or sediment flow into streams.[4]

If agreement cannot be reached or treatment will not meet fuel reduction objectives, BLM re-initiate consultation. Our authority to make these types of changes is in the regulations at 43 CFR 4110.3-3(b).

2.0 SPECIES SPECIFIC CONSERVATION MEASURES

In addition to the general Conservation Measures listed in **Section 1.0**, the following species-specific Conservation Measures will be applied to management actions in special status species habitats to the extent possible, and will be required during fuels and vegetation treatment

---

[1]"Project" means any surface-disturbing activities proposed that may cause disturbance of desert tortoise habitat and/or death or injury of a desert tortoise, with the exception of grazing by livestock and activities associated with fire suppression.

activities. Necessary modifications of the Conservation Measures or impacts to federally protected species and habitat during implementation of management actions will be documented by the BLM or NPS biologist, and coordinated with the USFWS.

2.1 Reptiles

2.1.1 Desert tortoise, Mojave population (FT)

DT-1. Minimize or eliminate effects to desert tortoise from authorized projects[1].

DT-1.A. For each authorized project[1], BLM and/or NPS will designate a field contact representative (FCR) who will be responsible for overseeing compliance with these conservation measures and for coordination on compliance with the USFWS. The FCR will be a qualified biologist approved by BLM and/or NPS, and will have the authority and the responsibility to halt all project activities that are in compliance with these conservation measures. These individuals will have a copy of these conservation measures while on the work site.

DT-1.B. To the extent possible, project features will be located in previously-disturbed areas or outside of desert tortoise habitat.

DT-1.C. To the extent possible, project activities will be scheduled when tortoises are inactive (October 15 through March 15). The following project activities will only be authorized between October 15 through March 15: surface disturbance associated with mineral leasing; organized, non-speed vehicular events; construction and non-emergency maintenance activities in rights-of-ways; and non-emergency maintenance of existing roads.

DT-1.D. Pre-construction surveys will be conducted to locate desert tortoises that may be injured or killed as a result of proposed activities. Projects will be altered or tortoises in harm's way will be relocated to avoid lethal take of tortoises in project areas. Prior to any surface-disturbing activities associated with "projects," work sites will be surveyed for desert tortoises by a qualified biologist approved by BLM and/or NPS. Areas of new disturbance will be surveyed with 100-percent coverage.

DT-1.D.1. Between October 15 and March 15 any new disturbance will be preceded by 100-percent surveys conducted within one week of the proposed activities. During surveys, occupied desert tortoise burrows in or within 40 feet of areas to be disturbed will be excavated using hand tools under the supervision of an authorized biologist. Tortoises discovered in burrows will be relocated. Burrows will then be collapsed or blocked to prevent entry by tortoises. Desert tortoises and any desert tortoise eggs found in areas to be disturbed will be relocated in accordance with conservation measure DT-1.D.4. All handling of desert tortoises and their eggs will be in accordance with conservation measure DT-1.D.4.

DT-1.D.2. For project activities occurring during the desert tortoise active season (March 15 through October 15), surveys will be conducted within 24 hours of initiation of surface-disturbing activities. For surface-disturbing activities conducted from March 15 to October 15 in desert tortoise habitat, construction and operation activities will be monitored by a qualified desert tortoise biologist approved by BLM and/or NPS. The biologist will be present during all activities in which encounters with tortoises may occur. The biologist will watch for tortoises wandering into construction areas, check under vehicles, check at least

three times per day any excavations that might trap tortoises, and conduct other activities necessary to ensure that death or injury of tortoises is minimized.

DT-1.D.3. Only biologists authorized and permitted by the USFWS and Arizona Game and Fish Department (AGFD) will handle desert tortoises. Additional biologists could be authorized if BLM and/or NPS submits the name(s) of the proposed authorized biologist(s) to the USFWS for review and approval at least 15 days prior to the onset of activities that could result in a take. Minimum requirements for authorized biologists include attending the Desert Tortoise Council's training course for handling desert tortoises and/or training by an authorized biologist. Authorized biologists must have all valid state and federal permits.

DT-1.D.4. The authorized biologist will maintain a record of all desert tortoises encountered during project activities. This information will include for each desert tortoise:

1. The locations and dates of observation
2. General condition and health, including injuries and state of healing and whether animals voided their bladders
3. Location moved from and location moved to
4. Diagnostic markings (i.e. identification numbers of marked lateral scutes)

Desert tortoises that are handled will be marked for future identification. An identification number (using the acrylic paint/epoxy technique) will be placed on the 4th costal scute (USFWS 1992). No notching of scutes or replacement of fluids with a syringe is authorized.

DT-1.E. If a tortoise or clutch of tortoise eggs is found in a project area, to the extent practicable activities will be modified to avoid injuring or harming it. If activities cannot be modified, the tortoise/clutch will be moved from harm's way by an the authorized biologist the minimum distance possible within appropriate habitat to ensure its safety from death, injury, or collection associated with the project or other activities. The authorized biologist will have some discretion to ensure that survival of each relocated desert tortoise/clutch is likely. Desert tortoises/clutches will not be translocated to lands outside the administration of the Federal government without the written permission of the landowner. Handling procedures for desert tortoises and their eggs will adhere to protocols outlined in Desert Tortoise Council (1994 with 1996 revisions).

DT-1.F. Areas of new construction or disturbance will be flagged or marked on the ground prior to construction. All construction workers will strictly limit their activities and vehicles to areas that have been marked. Construction personnel will be trained to recognize markers and understand the equipment movement restrictions involved.

DT-1.G. A desert tortoise education program will be presented to all project personnel that may encounter tortoises; such as employees, inspectors, supervisors, contractors, and subcontractors; prior to initiation of activities that may result in disturbance of desert tortoise habitat or death or injury of desert tortoises. The education program will include discussions of the following:

1. legal protection of the desert tortoise and sensitivity of the species to human activities;
2. a brief discussion of desert tortoise distribution and ecology;
3. the terms and conditions of applicable biological opinions;

4. project features designed to reduce adverse effects to desert tortoises and their habitat, and to promote the species' long-term survival;
5. protocols during encounters with desert tortoises and associated reporting requirements; and
6. the definition of take and penalties for violations of Federal and State laws.

DT-1.H. During the tortoise active season (March 15 through October 15), project features that might trap or entangle desert tortoises such as open trenches, pits, open pipes, etc will be covered or modified to prevent entrapment.

DT-1.I. Long-term or permanent project sites in which continued encounters with desert tortoises are expected, such as construction of schools under an R&PP lease, roads, power plants, office buildings, and other permanent or long-term projects will be enclosed with desert tortoise barrier fencing to prevent tortoises from wandering onto the project site where they may be subject to collection, death, or injury. Barrier fencing should consist of wire mesh with a maximum mesh size of 1-inch (horizontal) by 2-inch (vertical) fastened securely to posts. The wire mesh will extend at least 18 inches above the ground and preferably 12 inches below the surface of the ground. Where burial is not possible, the lower 12 inches will be folded outward, away from the enclosed site, and fastened to the ground so as to prevent tortoise entry. Any gates or gaps in the fence will be constructed and operated to prevent desert tortoise entry (such as installing "tortoise guards" similar to cattle guards, and/or keeping gates closed). Specific measures for tortoise-proofing gates and gaps will be addressed project by project. Once fence construction is complete, all tortoises within the fence will be relocated outside the fence in accordance with conservation measure DT-1.D.4. If more than 20 tortoises be relocated from any one area enclosed by a fence, the Bureau or NPS will contact the USFWS in regard to disposition of the animals. After the area within the fence has been cleared of tortoises, construction and operation activities may occur within the fence without the presence and monitoring of a biologist (see conservation measure DT-1.D.).

DT-1.J. Temporary fencing, such as snow fencing, chain link, and other suitable materials will be used in designated areas as determined by the Bureau to reduce encounters with tortoises from March 15 to October 15 on short-term projects, such as construction of power lines, burial of fiber optic cables, etc, where encounters with tortoises are likely.

DT-1.K. Blading of work areas will be minimized to the extent possible. Disturbance to shrubs will be avoided if possible. If shrubs cannot be avoided during equipment operation or vehicle use, wherever possible they will be crushed rather than excavated or bladed.

DT-1.L. Project vehicle use will be limited to designated routes (existing routes prior to designation) to the extent possible.

DT-1.M. At no time will vehicle or equipment fluids be dumped on public lands. All accidental spills must be reported to BLM and NPS and cleaned up immediately, using the best available practices according to the requirements of the law. All spills of federally or State-listed hazardous materials that exceed reportable quantities will be promptly reported to the appropriate State agency and the BLM and NPS.

DT-1.N. Vehicles associated with Bureau-authorized projects traveling on unpaved roads in desert tortoise habitat will not exceed speed limits established by the Bureau as necessary to protect desert tortoises. These speed limits will generally not exceed 40 mph even on the best-unpaved roads but may be much less than this on some roads.

DT-1.O. New paved roads and highways in desert tortoise habitat or major reconstruction or modifications of existing paved roads through desert tortoise habitat will be fenced with desert tortoise barrier fencing (see DT-1.I. and J.). Culverts, to allow safe passage of tortoises, will be constructed approximately every mile of new or reconstructed paved road (culverts can also serve the more typical purpose of conducting water under roads). The culvert diameter needed to encourage tortoise use is correlated with culvert length, but generally short culverts of large diameter are most likely to be used. The floor of the culvert will be covered with dirt and maintenance should be performed as necessary to maintain an open corridor for tortoise movement. Culvert design will be coordinated with and approved by the USFWS.

DT-1.P. Unleashed dogs will be prohibited in project areas.

DT-1.Q. Temporary access routes created during project construction will be modified as necessary to prevent further use. Closure of access routes could be achieved by ripping, barricading, posting the route as closed, and/or seeding and planting with native plants.

DT-1.R. To reduce attraction of potential desert tortoise predators, project sites in desert tortoise habitat will be maintained in a sanitary condition at all times; waste materials at those sites will be placed in covered receptacles and disposed of promptly at an appropriate waste disposal site. "Waste" refers to all discarded matter, including, but not limited to, human waste, trash, garbage, refuse, oil drums, petroleum products, ashes, and equipment. All reasonable effort will also be taken to reduce or eliminate water sources associated with project activities that might attract ravens and other predators.

DT-1.S. After completion of the project, trenches, pits, and other features in which tortoises could be entrapped or entangled, will be filled in, covered, or otherwise modified so they are no longer a hazard to desert tortoises.

DT-1.T. After project completion, measures will be taken to facilitate restoration. Restoration techniques will be tailored to the characteristics of the site and the nature of project impacts. Techniques may include removal of equipment and debris, recontouring; and seeding, planting, transplanting of cacti and yuccas, etc. Only native plant species, preferably from a source on or near the project area, will be used in restoration.

DT-2 Take appropriate action to suppress all wildfires in desert tortoise habitat.

DT-2.A. As soon as practical, all personnel involved in wildfire suppression (firefighters and support personnel) will be briefed and educated about desert tortoises and the importance of protecting habitat and minimizing take, particularly due to vehicle use. Fire crews will be briefed on the desert tortoise in accordance with Appendix II of Duck et al. (1995).

DT-2.B. If wildfire or suppression activities cannot avoid disturbing a tortoise, the Resource Advisor or monitor will relocate the tortoise, if safety permits. The tortoise will be moved into the closest suitable habitat within two miles of the collection site that will ensure the animal is reasonably safe from death, injury, or collection associated with the wildfire or suppression activities. The qualified biologist will be allowed some discretion to ensure that survival of each relocated tortoise is likely. If the extent or direction of movement of a fire makes sites within two miles of the collection site unsuitable or hazardous to the tortoise or biologists attempting to access the area, the tortoise may be held until a suitable site can be found or habitat is

safe to access and not in immediate danger of burning. The Resource Advisor will contact the USFWS Arizona Ecological Services Field Office (AESFO) as soon as possible concerning disposition of any animals held for future release. Desert tortoises will not be placed on lands outside the administration of the Federal government without the written permission of the landowner. Handling procedures for tortoises, including temporary holding facilities and procedures, will adhere to protocols outlined in Desert Tortoise Council (1994).

DT-2.C. Upon locating a dead, injured, or sick desert tortoise, initial notification must be made to the appropriate USFWS Law Enforcement Office within three working days of its finding. Written notification must be made within five calendar days and include the date, time, and location of the animal, a photograph, and any other pertinent information. The notification will be sent to the Law Enforcement Office with a copy to the AESFO.

DT-2.D. Care must be taken in handling sick or injured animals to ensure effective treatment and care, and in handling dead specimens to preserve biological material in the best possible state. If possible, the remains of intact desert tortoises will be placed with educational or research institutions holding appropriate State and Federal permits. If such institutions are not available, the information noted above will be obtained and the carcass left in place. Arrangements regarding proper disposition of potential museum specimens will be made with the institution prior to implementing the action. Injured animals should be transported to a qualified veterinarian by an authorized biologist. Should any treated desert tortoise survive, the USFWS should be contacted regarding final disposition of the animal.

DT-2.E. The Resource Advisor or monitor(s) will maintain a record of all desert tortoises encountered during fire suppression activities. This information will include for each desert tortoise: 1) locations and dates of observation; 2) general condition and health, including injuries and state of healing, and whether animals voided their bladders; 3) location moved from and to; and 4) diagnostic markings (i.e., identification numbers of marked lateral scutes). No notching of scutes or replacement of fluids with a syringe is authorized.

DT-2.F. Prior to moving a vehicle, personnel will inspect under the vehicle for tortoises. If a tortoise is found under the vehicle, the tortoise will be allowed to move away from the vehicle on its own accord, if possible. Otherwise, an individual will move the tortoise to a safe locality in accordance with FS-2 and DT-1.E.

DT-2.G. Off-road vehicle activity will be restricted to the minimum necessary to suppress wildfires. Off-road vehicle activity will not be permitted on NPS lands. Vehicles will be parked as close to roads as possible, and vehicles will use wide spots in roads or disturbed areas to turn around. Whenever possible, a biologist or crewperson trained to recognize tortoises and their shelter sites will precede any vehicle traveling off-road to direct the driver around tortoises and tortoise burrows. Whenever possible, local fire-fighting units should provide direction and leadership during off-road travel because of their expertise and knowledge of area sensitivities.

DT-2.H. Fire-related vehicles will drive slow enough to ensure that tortoises on roads can be identified and avoided.

DT-2.I. Fire crews or rehabilitation crews will, to the extent possible, obliterate off-road vehicle tracks made during fire suppression in tortoise habitat, especially those of tracked vehicles, to reduce future use.

DT-2.J. To the maximum extent practical, campsites, aircraft landing/fueling sites, and equipment staging areas will be located outside of desert tortoise habitat or in previously disturbed areas. If such facilities are located in desert tortoise habitat, 100 percent of the site will be surveyed for desert tortoises by a qualified biologist approved by BLM or NPS, whenever feasible. Any tortoises found will be moved to a safe location in accordance with FS-2 and DT-1.E. All personnel located at these facilities will avoid disturbing active tortoise shelter sites.

DT-2.K. Elevated predation by common ravens or other predators attributable to fire suppression activities will be reduced to the maximum extent possible. Work areas, including campsites, landing/fueling sites, staging areas, etc. will be maintained in a sanitary condition at all times. Waste materials at those sites will be contained in a manner that will avoid attracting predators of desert tortoises. Waste materials will be disposed of at an appropriate waste disposal site. "Waste" means all discarded matter including, but not limited to, human waste, trash, garbage, refuse, oil drums, petroleum products, ashes, and equipment.

DT-2.L. Backfiring operations are permitted where necessary in desert tortoise habitat. Burning out patches of identified habitat within or adjacent to burned areas is not permitted as a standard fire suppression measure unless necessary for firefighter or public safety or to protect property, improvements, or natural resources.

DT-2.M. Use of foam or retardant is authorized within desert tortoise habitat.

DT-2.N. Rehabilitation of vegetation in tortoise habitat will be considered, including seeding, planting of perennial species, etc.

DT-2.O. Recovery of vegetation will be monitored, including establishing and monitoring paired plots, inside and outside burned areas in tortoise habitat. Recovery plans will be coordinated with the USFWS and AGFD.

DT-2.P. The effectiveness of wildfire suppression activities and desert tortoise Conservation Measures will be evaluated after a wildfire. Procedures will be revised as needed.

2.2 AMPHIBIANS (AM) (INCLUDES RELICT LEOPARD FROG (FC))

AM-1 Implement the Conservation Measures for Fire Management Activities in Riparian and Aquatic Habitats.

AM-2 All personnel performing fire management activities at any creek crossing will be informed of the potential presence of aquatic amphibians and the need to perform their duties to avoid impacts to the habitat.

2.3 BIRDS

2.3.1 California Condor (FE and 10J)

Conservation Measures for California Condor

CC-1. Management Guidance for Projects Constructed or Implemented by Authorized or Permitted Members of the Public within the 10(j) Area

CC-1.A. Immediately prior to the start of an authorized or permitted project, BLM/NPS will contact personnel monitoring California Condor locations and movements on the Arizona Strip to determine the locations and status of condors in or near the project area.

CC-1.B. BLM/NPS will request that permit holders notify the BLM/NPS wildlife team lead or condor biologist if California Condors visit the worksite while permitted activities are underway. BLM/NPS may encourage permit holders to modify, relocate, or delay project activities where adverse affects to condors may result.

CC-1.C. Where condor nesting activity is known within 0.5 miles of permitted or authorized activities that include operation of heavy machinery, BLM/NPS may encourage the operator to avoid use of the equipment during the active nesting season (February 1- November 30), or as long as the nest is viable.

CC-1.D. Where condors occur within 1.0 mile of permitted or authorized activities that include blasting, BLM/NPS will encourages that blasting be postponed until the condors leave the area or are hazed away by personnel permitted to haze condors. Where condor nesting activity is known within 1.0 mile of the project area, BLM/NPS encourages that blasting activity be delayed until after the active nesting season (February 1- November 30), or as long as the nest is viable. These dates may be modified based on the most current information regarding condor nesting.

CC-2. Management Guidance for Projects Constructed or Implemented by BLM/NPS Employees or Contractors Within the 10(j) Area AND For All BLM/NPS-Authorized Actions, Regardless of Proponent, Outside the 10(j) Area on the Arizona Strip.

CC-2.A. Immediately prior to the start of a permitted project, BLM/NPS will contact personnel monitoring California Condor locations and movement on the Arizona Strip to determine the locations and status of condors in or near the project area.

CC-2.B. Where California Condors visit a worksite while activities are underway, the on-site supervisor will notify the BLM/NPS wildlife team lead or condor biologist. Project workers and supervisors will be instructed to avoid interaction with condors. Project activities will be modified, relocated, or delayed if those activities could have adverse affects on condors. Operations will cease until the bird leaves on its own or until techniques are employed by permitted personnel that results in the individual condor leaving the area.

CC-2.C. Where condor nesting activity is known within 0.5 miles of activities that include operation of heavy machinery, BLM/NPS will direct the operator to cease equipment use during the active nesting season (February 1- November 30), or as long as the nest is viable. Where feasible and consistent with NEPA, BLM/NPS may relocate operations to a site greater than 0.5 miles from the condor nest site.

CC-2.D. Where condors occur within 1.0 miles of activities that include blasting, BLM/NPS will require that blasting be postponed until the condors leave the area or are hazed away by personnel permitted to haze condors. Where condor nesting activity is known within 1.0 miles of the project area, BLM/NPS will cease

blasting during the active nesting season (February 1- November 30), or as long as the nest is viable. These dates may be modified based on the most current information regarding condor nesting.

CC-3. Management Guidance for All BLM/NPS-Authorized Actions, Regardless of Proponent or location Within the Planning Area.

CC-3.A. The project site will be cleaned up at the end of each day the work is being conducted (e.g., trash removed, scrap materials picked up) to minimize the likelihood of condors visiting the site. BLM/NPS staff may conduct site visits to the area to ensure adequate clean-up measures are taken.

CC-3.B. For projects where potential exists for leakage or spill of hazardous materials, a spill plan will be developed and implemented to prevent water contamination and potential poisoning of condors. The plan will include provisions for immediate clean up of any hazardous substance, and will define how each hazardous substance will be treated in case of leakage or spill. The plan will be reviewed by the BLM condor lead biologist to ensure condors are adequately addressed.

CC-3.C BLM/NPS will implement the protective measures for California Condors that are contained in the March 2004 "Recommended Protection Measures for Pesticide Applications in The Southwest Region of the USFWS."

CC-3.D. Use of non-lead ammunition is strongly encouraged for activities involving the discharge of firearms.

CC-4. Management Guidance for All Actions Involving Use of Aircraft, Regardless of Proponent or location Within the Planning Area.

CC-4.A. Aircraft use along the Vermilion Cliffs, Paria Plateau, or any sites where condors are actively breeding or roosting will be minimized to the extent possible. Known active nest sites will be avoided.

CC-4.B. The BLM condor biologist or Wildlife Program Lead will contact the Peregrine Fund, as appropriate, immediately before operations involving aviation begin to check on possible locations of condors in the subject area.

CC-4.C. All BLM/NPS-authorized aviation personnel will be provided literature and/or instructed regarding condor concerns prior to conducting aerial operations.

CC-4.D. Aircraft will maintain and maximize safe flying separation distances from condors in the air or on the ground unless safety concerns override this restriction. If airborne condors approach aircraft, aircraft will give up airspace to the extent possible, as long as this action does not jeopardize safety. Aircraft will keep a minimum of 0.25 miles away from condors located on the ground.

CC-5. Management Guidance for Fire Suppression, Fire Use, Prescribed Fire, and Related Actions Within the Planning Area.

CC-5.A. The Resource Advisor will contact the Peregrine Fund daily (at 520-606-5155 or 520-380-4667) to check on locations of condors during fire suppression or fuels treatment activities involving aviation. This information will be communicated to the Incident Commander and aviation personnel.

CC-5.B. Any presence of condors in the general area of an active fire will be reported immediately to the Resource Advisor, who will in turn advise the BLM condor biologist, as appropriate. The BLM condor biologist or the AZ Strip FO wildlife team lead will be the primary contacts with the USFWS and the Peregrine Fund when such contacts are needed regarding condor concerns.

CC-5.C. Fire dispatch will immediately notify the Peregrine Fund at either (208) 362-3811 or (928) 355-2270 whenever a fire or other event on the Paria Plateau is reported which may conceivably threaten the condor holding pens and facilities atop the Vermilion Cliffs.

CC-5.D. If condors arrive at any area of human activity associated with fire suppression or fuels treatment projects (wildland fire use, prescribed fire, vegetation treatments), the birds will be avoided. The assigned Resource Advisor or a qualified wildlife biologist approved by BLM will be notified, and only permitted personnel will haze the birds from the area.

CC-5.E. All District BLM/NPS fire personnel, including helicopter pilots, will be provided literature or instructed regarding condor concerns. Normally this will be done by the BLM condor biologist when the fire crews first come on and are trained on various subjects, including desert tortoise concerns. If additional pilots come on during the summer, fire dispatch will notify the BLM condor biologist (435 688-3224) so that they can also be briefed.

CC-5.F. All helicopter dip tanks containing water will be covered when not in use or personnel will be stationed nearby until a cover is in place.

CC-5.G. If any fire retardant chemicals must be used in areas where condors are in the vicinity, the application area will be surveyed and any contaminated carcasses will be removed as soon as practical to prevent them from becoming condor food sources.

CC-5.H. Smoke from prescribed fire projects will be prevented from negatively affecting condor holding pens and breeding, nesting, and chick rearing sites. A proposed prescribed fire will not be initiated, or an existing fire use event will be modified or terminated, in order to prevent or stop significant amounts of smoke, or smoke that will remain in place for an extended period of time, or chronic smoke events, from occurring in area(s) where condors are held or attempting to breed, nest, or rear chicks.

CC-5.I. BLM will adhere to the air quality standards set by the Arizona Department of Environmental Quality.

CC-5.J. All camp areas will be kept free from trash.

2.3.2 Southwestern willow flycatcher (FE)

Conservation Measures for Southwestern Willow Flycatcher

WF-1. Management Guidance for Fire Suppression and Related Actions

WF-1.A. Implement the Conservation Measures for Fire Management Activities in Riparian and Aquatic Habitats.

WF-1.B. Except where fires are active in occupied habitat, minimize unnecessary low-level helicopter flights during the breeding season (April 1 – September 30). Approach bucket dip sites at a 90-degree direction to rivers to minimize flight time over the river corridor and occupied riparian habitats. Locate landing sites for helicopters at least ¼ mile from occupied sites to avoid impacts to willow flycatchers and their habitat.

WF-1.C. Minimize use of chainsaws or bulldozers to construct firelines through occupied or suitable habitat except where necessary to reduce the overall acreage of occupied habitat or other important habitat areas that otherwise be burned.

WF-1.D. Implement activities to reduce hazardous fuels or improve riparian habitats (prescribed burning or vegetation treatments) within occupied or unsurveyed suitable habitat for southwestern willow flycatchers only during the non-breeding season (October 1 to March 31).

WF-1.E. Avoid developing access roads that result in fragmentation or a reduction in habitat quality. Close and rehabilitate all roads that were necessary for project implementation.

WF-1.F. Prescribed burning will only be allowed within ½ mile of occupied or unsurveyed suitable habitat when weather conditions allow smoke to disperse away from the habitat when birds may be present (breeding season of April 1 – September 30).

WF-1.G. Vegetation treatment projects adjacent to occupied or unsurveyed suitable habitat will only be conducted when willow flycatchers are not present (October 1 – March 31).

WF-1.H. Continue to implement the riparian fire management plan to minimize fire damage in riparian areas, especially those with suitable or potential flycatcher habitat.

2.3.3. Yuma clapper rail (FE)

Conservation Measures for Yuma Clapper Rail

CR-1. Management Guidance for Fire Suppression and Related Actions

CR-1.A. Implement the Conservation Measures for Fire Management Activities in Riparian and Aquatic Habitats.

CR-1.B. Any prescribed fire or vegetation treatment project in occupied or suitable marsh habitat only occur between September 1 and March 15 to avoid the Yuma clapper rail breeding and molting seasons.

CR-1.C. Mechanical removal of overstory habitat (e.g. tamarisk) could occur as early as August 15, after the breeding season for Yuma clapper rails.

CR-1.D. Herbicide application will not occur in Yuma clapper rail habitat and drift-inhibiting agents will be used to assure that the herbicide does not enter adjacent marsh areas.

CR-1.E. Evaluate past surveys for Yuma clapper rails as part of the planning for prescribed fire projects. Post-project surveys should also be conducted to document the re-growth of cattail habitats and occupancy by clapper rails.

CR-1.F. After fire suppression is completed in Yuma clapper rail habitat, review any available survey records of the burn site and record in the fire report the number of rails recorded from the vicinity during these surveys.

2.3.4. Bald eagle (FT)

Conservation Measures for Bald Eagle

BE-1. Management Guidance for Fire Suppression and Related Actions

BE-1.A. No human activity associated with fire management will be authorized within ½ mile of known bald eagle nest sites between December 1 and June 30.

BE-1.B. No tree cutting will be authorized within ¼ mile of known bald eagle nest trees.

BE-1.C. No human activity associated with fire management will be authorized within ¼ mile of known bald eagle winter roost areas between October 15 and April 15.

BE-1.D. No tree cutting will be authorized within the area immediately around winter roost sites as determined by BLM biologists.

BE-1.E. No helicopter or aircraft activity or aerial retardant application associated with fire management activities will be authorized within ½ mile of bald eagle nest sites between December 1 and June 30 or winter roost sites between October 15 and April 15.

BE-1.F. Prescribed burn activities outside of nesting season will be conducted in a manner to ensure nest and winter roost sites are more than ½ mile from downwind smoke effects.

BE-1.G. Provide reasonable protective measures so fire prescription or fuels treatment will not consume dominant, large trees as identified by the Resource Advisor or qualified biologist approved by BLM within ½ mile of known nests and roosts of bald eagles. Pre-treatment efforts should provide reasonable protection of identified nesting and roosting trees.

BE-1.H. Prepare and implement BAER plans for burned areas that have the potential to cause future erosion problems in the watershed, riparian, or aquatic areas. Objectives of these plans, within watersheds containing bald eagle breeding areas and/or potential habitat, will be to reduce erosion and sedimentation into these habitats.

2.3.5 Mexican spotted owl (FT)

Conservation Measures for Mexican Spotted Owl

SO-3. Management Guidance for Grazing Management

SO-3.A. Determine the effectiveness of current grazing standards and guidelines as they relate to the owl's needs, and devise grazing strategies that can benefit the owl and its prey.

SO-3.B. Monitor grazing use by livestock to determine any changes in the relative composition of herbaceous and woody plants to maintain habitat for owls and their prey.

SO-3.C. Minimize or eliminate disturbance, injury, mortality, or other forms of take of Mexican spotted owls resulting from grazing by livestock.

SO-1. Management Guidance for Fire Suppression and Related Actions

SO-1.A. BLM wildlife biologists will be involved early in the decision-making process for fuels management treatments (wildland fire use, prescribed fires, vegetation treatments) that are planned within suitable habitat for Mexican spotted owls.

SO-1.B. Suitable habitat for Mexican spotted owls will be surveyed prior to implementing prescribed fire or vegetation treatment activities on BLM-administered lands to determine if owls are present and their breeding status. These fire management activities will only be implemented within suitable habitat if birds are not present.

SO-1.C. If a spotted owl is discovered during fire suppression or fuels treatment activities (wildland fire use, prescribed fire, vegetation treatments), the Resource Advisor or a qualified wildlife biologist will document the find and assess potential harm to the owl and advise the Incident Commander or project crew boss of methods to prevent harm. The information will include for each owl the location, date, and time of observation and the general condition of the owl. The Resource Advisor or biologist will contact the appropriate USFWS office.

SO-1.D. The following measures will be followed in suitable habitat (occupied or unoccupied) whenever consistent with objectives to reduce hazardous fuels:

1. Incorporate natural variation, such as irregular tree spacing and various stand/patch sizes, into management prescriptions and attempt to mimic natural disturbance patterns.
2. Maintain all species of native vegetation in the landscape, including early seral species. To allow for variation in existing stand structures and provide species diversity, both uneven-aged and even-aged systems may be used as appropriate.
3. Allow natural canopy gap processes to occur, thus producing horizontal variation in stand structure.
4. Retain hardwoods, large down logs, large trees, and snags. Emphasize a mix of size and age classes of trees. The mix should include large mature trees, vertical

diversity, and other structural and floristic characteristics that typify natural forest conditions.

SO-1.E. The effects of fire suppression and fuels treatment activities on Mexican spotted owls and their habitat, and the effectiveness of these conservation measures, will be assessed after each fire event or fuels treatment project by the Resource Advisor or local biologist to allow evaluation of these guidelines. Prescriptions for wildland fire use, prescribed fires, and vegetation treatments will be adjusted, if necessary.

2.3.6. Yellow-billed cuckoo (FC)

Conservation Measures for Yellow-billed Cuckoo

YC-1. Management Guidance for Fire Suppression and Related Actions

YC-1.A. Implement the Conservation Measures for Fire Management Activities in Riparian and Aquatic Habitats.

YC-1.B. Any prescribed fire or vegetation treatment project in occupied or suitable marsh habitat only occur between September 1 and March 15 to avoid adverse affects to breeding birds.

YC-1.C. Mechanical removal of overstory habitat (e.g. tamarisk) could occur as early as September 1, after the breeding season for yellow-billed cuckoos.

YC-1.D. Evaluate past surveys for yellow-billed cuckoos as part of the planning for prescribed fire projects. Post-project surveys should also be conducted to document the re-growth of mature cottonwood-willow gallery forests and occupancy by cuckoos.

YC-1.E. After fire suppression is completed in yellow-billed cuckoo habitat, review any available survey records of the burn site and record in the fire report the number of cuckoos recorded from the vicinity during these surveys.

YC-1.F. Continue to implement the riparian fire management plan to minimize fire damage in riparian areas, especially those with suitable or potential flycatcher habitat.

2.3.7. Peregrine Falcon (BLM Sensitive)

Conservation Measures for Peregrine Falcon

Continue post-delisting recovery monitoring of selected peregrine falcon nest sites in cooperation with the AGFD and the USFWS. The monitoring plan calls for five sampling periods at three-year intervals throughout the life of this Approved Plan. Monitoring protocol requires a minimum of two, four-hour visits to a site unless a nest is located sooner.

PF-1. Management Guidance for Fire Suppression and Related Actions

PF-1.A. BLM wildlife biologists will be involved early in the decision-making process for fuels management treatments (wildland fire use, prescribed fires, vegetation treatments) that are planned within ½ mile of active nest sites of peregrine falcon.

PF-1.B. Prior to implementing prescribed fire or vegetation treatment activities on BLM-administered lands, areas within ½ mile of cliff faces that could contain suitable habitat for peregrine falcon will be surveyed. Fire management activities will only be implemented when peregrine falcons are not present.

PF-1.C. If a peregrine falcon is discovered during fire suppression or fuels treatment activities (wildland fire use, prescribed fire, vegetation treatments), the Resource Advisor or a qualified wildlife biologist will document the find, assess potential harm to the falcon, and advise the Incident Commander or project crew boss of methods to prevent harm.

2.4. VIRGIN RIVER FISHES (not in Grand Canyon-Parashant National Monument)

2.5. Flowering Plants

Conservation Measures for Special Status Plants

PL-1. Management Guidance for Fire Suppression and Related Actions

PL-1.A. Known locations and potential habitat for plant populations will be mapped to facilitate planning for wildland fire use, prescribed fires, and vegetation treatments, and to ensure protection of these populations during fire suppression.

PL-1.B. Delineate buffer areas around plant populations prior to prescribed fire and vegetation treatment activities. Coordinate with USFWS during any emergency response and wildland fire use activities to ensure protection of plant populations from fire and fire suppression activities.

PL-1.C. No staging of equipment or personnel will be permitted within 100 meters of identified individuals or populations of special status plant species during fire suppression, wildland fire use, or prescribed fire. Off-road vehicles will not be allowed within the 100-meter buffer area, unless necessary for firefighter or public safety or the protection of property, improvements, or other resources.

PL-1.D. No prescribed burning will be implemented within 100 meters of identified locations or unsurveyed suitable habitat of special status plant species unless specifically designed.

APPENDIX H

VISUAL RESOURCE MANAGEMENT CLASSES AND OBJECTIVES FOR CLASSES

APPENDIX H: VISUAL RESOURCE MANAGEMENT CLASSES AND OBJECTIVES FOR CLASSES

A. INTRODUCTION

The Visual Resource Management (VRM) system provides a means: to identify visual values; to establish objectives through the land use plan process for managing these values; and to provide timely inputs into proposed surface disturbing projects to ensure that these objectives are met. The objectives also provide visual management standards for the design and development of future projects and for rehabilitation of existing projects. Assigning values to visual resources produces information that, once passed through the VRM system, is to be used as a guide during project development. The Monument manager and/or Superintendent makes the decision on the amount of visual change that is acceptable for a project or activity proposal.

Following the update of the existing visual resource inventory to incorporate identified Monument scenic values and higher public sensitivity to those values, VRM classes were potentially designated for all Bureau of Land Management (BLM)-administered lands under all alternatives in the Arizona Strip Proposed Plan/FEIS and for NPS lands under Alternatives B through E. While VRM management classes may differ from VRM inventory classes, based on management priorities for land uses, the inventory did serve as the basis for considering and developing potential VRM designations. The potential for VRM classes to reflect and support resource allocation decisions significantly shaped the potential VRM designations in each alternative of the Proposed Plan/FEIS. If, for example, it was concluded that under the Plan resource allocation decisions that the "visual contrast rating scores will exceed the VRM class objectives" for a number of areas, the typical response will be to lower the VRM inventory rating for those areas to reflect the Plan's resource allocation decisions in those areas.

As VRM class designations are established upon the signing of the Record of Decision for the Approved Plan, it is the responsibility of the manager to ensure that visual impacts are minimized in all resource development activities including non-BLM initiated projects. Once established, VRM class designations are more than merely guidelines. Rather, having been developed through the Planning process, meeting the objectives of each of the respective visual resource classes is as much a part of the Plan mandate as any other aspect of the resource allocation decisions made in the Approved Plan.

Since the overall VRM goal is to minimize visual impacts, mitigating measures should be prepared for all adverse contrasts that can be reduced, including the reduction of contrast in projects that have met the VRM objectives. This is done by incorporating visual design considerations into all surface disturbing projects regardless of size or potential impact. This does not mean that VRM would be used as a method to preclude all other resource development. It does mean that the visual values must be considered and those considerations documented in

the decision-making process, and that if resource development/extraction is approved, a reasonable attempt must be made to meet the VRM objectives for the area in question and to minimize the visual impacts of the proposal.

To facilitate incorporating visual design considerations into surface disturbing projects so as to assist management in the minimization of potential visual impacts, the contrast rating process is used as a visual design tool in project design and as a project assessment tool during environmental review. Contrast ratings are required for proposed projects in highly sensitive areas or high impact projects, but may also be used for other projects where it would appear to be the most effective design or assessment tool. A brief narrative visual assessment will be completed for all other projects that require an environmental assessment or environmental impact statement.

In its simplest form, the contrast rating process documents the existing form, line, color and texture aspects of landform, vegetation, and structures for a project area. It then documents the predicted form, line, color, and texture aspects the landform, vegetation and structures would display with the proposed project in place as observed from key observation points, such as overlooks or high-use travel corridors. The difference between the "before" and "after" represents the potential contrast produced by the project. If the overall level of contrast is within the standard or objective for the VRM class within which it lies, the project is considered to meet the VRM objective. If the contrast rating is outside the standard or objective, mitigation measures are considered and applied, in essence, redesigning the project to attempt to bring it into conformance with the VRM standard or objective. (For more information about contrast ratings, see BLM Handbook H-8431-1, Visual Resource Contrast Rating online at http://www.blm.gov/nstc/VRM/8431.html).

In applying the VRM Class objectives in the Approved Plan, the following general criteria were considered:

- Consider the overall management emphasis.
- Recognize all applicable special designations and all land use allocations as VRM classifications are applied.
- Assure that other management activities and land uses being provided for in a specific area may be achieved within the VRM Class objective being set, consistent with special designations and land use allocations.
- Use the least restrictive class that still achieves objectives to attain desired future conditions.

Setting VRM Class objectives that will make it difficult to achieve management activities or uses identified elsewhere within the Approved Plan was avoided during the designation process. VRM Class I was typically used only for those areas where congressional and administrative decisions have been or will be made to preserve a natural landscape.

VRM Class objectives are set by Bureau policy and the critical concepts are summarized below in Table H-1 (see also VRM decisions in this Approved Plan):

Table H-1. VRM Class Objectives.	
VRM Class I	**VRM Class II**
Preserve existing character of the landscape	**Retain** existing character of the landscape
Natural ecological changes	**Changes repeat the basic elements** of form, line, color, and texture found in the predominant natural features of the characteristic landscape
Very limited management activity	Management activities **may be seen**
Level of Change-**very low**	Level of Change-**low**
Must not attract attention	**Should not attract attention** of casual observer
VRM Class III	**VRM Class IV**
Partially retain existing character of the landscape	**Allow major modifications** of existing character of the landscape
Changes should repeat the basic elements in the predominant natural features of the characteristic landscape	**Make every attempt to minimize the impact** of activities through careful location, minimal disturbance, and repeating the basic elements
(management activities not addressed)	**Provide for management activities** which require major modifications of existing landscape character
Level of Change-**moderate**	Level of Change-**major**
May attract attention but should not dominate the casual observer's view	**May dominate the view** and be the major focus of viewer attention

B. SPECIFIC CRITERIA FOR VRM CLASSES

The following specific criteria are used to define VRM classes in the Monument and are reflected on the GIS maps and in the acreage numbers in the Approved Plan.

Class I

- Designated Wilderness (BLM)
- Lake Mead Proposed Wilderness (NPS)
- Areas where wilderness characteristics will be maintained on NPS lands

Class II

- Parashant outside potential vegetation treatment areas in Class III areas below, Class I areas above or Class IV below
- Selected areas where wilderness characteristics will be maintained (slopes greater than 30 degrees, no potential for vegetation treatment or restoration)
- Areas where wilderness characteristics will be maintained in Parashant Canyon and Lower Andrus Canyon

Class III

- Portions of the eastern part of the Monument with potential vegetation restoration/treatment

Class IV

- No Class IV areas exist in the Monument

APPENDIX I

RECLAMATION STIPULATIONS

APPENDIX I: RECLAMATION STIPULATIONS

Appendix I is a list of general requirements for preserving and protecting the special environmental and unique resource values of the Monument. These requirements will guide the formulation of specific stipulations, construction and/or operating standards, which will be applied to surface-disturbing activities. They are designed to provide public land users with a clear understanding of what constitutes prevention of unnecessary or undue degradation and what is required for reclamation. These requirements are supported by FLPMA, the Organic Act, and other environmental laws. Suitable site-specific stipulations regarding construction and reclamation and the prevention of unnecessary or undue degradation will be developed by the authorized officer and applied to each authorization In order to minimize long-term impacts and ensure that sites are effectively reclaimed.

UNNECESSARY OR UNDUE DEGRADATION

1. All surface disturbance, including road construction and associated travel, shall be kept to the minimum necessary to accomplish the task. Road upgrade and realignment requests on BLM lands shall include plans for reclamation and a proposal for a post-operations final alignment.

2. All new temporary or existing upgraded roads on BLM lands may require mitigation to reduce the potential adverse impact of fugitive dust as specified by the authorized officer.

3. Where soil characteristics warrant, topsoil shall be stockpiled from a surface depth specified by the authorized officer.

4. All surface-disturbing activities on slopes greater than 15 percent shall include measures to stabilize soils and control surface water runoff.

5. During construction and operation of facilities or improvements, care shall be taken to minimize, to the extent practicable, impacts to the natural and human environments. This may be accomplished through the painting or screening of structures and facilities to blend with the surrounding environment; the suppression of dust and noise; the proper disposal of waste products; and provisions to safeguard public safety.

6. Coloration products may be required along travel corridors and in VRM Class II areas to reduce color contrast and restore the natural color balance.

7. Construction and reclamation activities shall be designed to minimize long-term impacts to natural lines, form, textures and color contrast. Reclamation methods shall avoid disturbing more area or exposing greater color contrast than resulted from the original operation.

8. All facilities or improvements that are no longer needed must be removed.

9. In order to protect the wildlife, the public or other important values and discourage unnecessary public contact with authorized activities, the authorized officer may require improvements or facilities to be fenced, gated and locked.

10. Mineral material disposal in VRM Class II areas shall not be allowed if reasonable alternative sources are available in other VRM classes. Any mineral material disposal sites authorized in VRM Class II shall not compromise the VRM class objectives.

11. All powerlines on BLM lands shall be constructed to minimize visual impacts. This may include burying them along existing roads in VRM Class II areas.

12. Applicants shall supply, at the discretion of the authorized officer, pertinent information regarding Impacts from the proposal on surface and groundwater quality and quantity and anticipated impacts from 100-year, 24-hour storm events.

13. All forms of residential occupancy are discouraged on public lands within the Arizona Strip District and prohibited on NPS lands. Exceptions may occur on BLM lands for the protection of public health and safety and the protection of private property. Residential occupancy not in conformance with applicable laws, Bureau guidelines and district policy will be subject to immediate trespass action by the Bureau.

14. Applicants may be required by the authorized officer to provide inventories for threatened or endangered plants and/or animals and cultural resources. All Inventories shall be performed to Bureau or NPS standards.

15. No surface disturbance shall be authorized which impacts any cultural sites prior to consultation with the State Historic Preservation Officer (SHPO) and threatened or endangered species prior to compliance with the Endangered Species Act.

16. No surface disturbance will be authorized which impacts any cultural property that is allocated to Conservation Use in an approved Cultural Resource Management Plan.

RECLAMATION

1. Reclamation of all surface disturbances must be initiated immediately upon completion of activities, unless otherwise approved by the authorized officer. Reclamation of disturbed areas shall, to the extent practicable, include contouring disturbances to blend with the surrounding terrain, replacement of topsoil, smoothing and blending the original surface colors to minimize impacts to visual resources, and seed the disturbed areas with a mix specified by the authorized officer.

2. All chemicals, trash, garbage or other foreign material must be removed completely from the project area by the applicant immediately upon completion of the project. All material must be properly disposed of in an approved disposal facility. Exceptions to this limitation shall be approved by the authorized officer.

3. At no time shall vehicle or equipment fluids be dumped on public lands. All accidental spills must be reported to BLM or NPS and be cleaned up immediately, using best available practices and requirements of the law. All spills of federally or state listed hazardous materials which exceed the reportable quantities shall be promptly reported to the appropriate state agency and the Arizona Strip District.

4. Disturbed areas, where soil and rainfall are adequate for anticipated success, shall be revegetated. In all VRM Class II areas revegetation of native species shall be preferred. Rates and seed mixes shall be determined by the authorized officer.

5. Revegetation efforts must establish a stable biological groundcover equal to or exceeding that which occurred prior to disturbance. Mulching may be appropriate for conserving moisture and holding seed on-site thus improving the chances for successful establishment.

6. All unnecessary roads shall be reclaimed and closed immediately upon termination of the project. Recontouring all cut slopes to approximately the original contour shall be required. Reclaimed roads shall be barricaded or signed to protect them until reclamation is achieved. All existing roads that require upgrading shall be reclaimed to their original dimensions upon completion of the project. Exceptions must be approved in writing by the authorized officer.

APPENDIX J

RECREATION MANAGEMENT AREAS

APPENDIX J: RECREATION MANAGEMENT AREAS

OVERVIEW

Two types of Recreation Management Areas (RMAs) are identified in the land use plan for BLM lands; Special Recreation Management Areas (SRMAs) and Extensive Recreation Management Areas (ERMAs). In the Parashant only, Special Management Areas (SMAs) will be identified on NPS lands.

SPECIAL RECREATION MANAGEMENT AREAS

SRMAs are identified in the planning process as areas with a distinct primary recreation-tourism market (who are the targeted visitors and where do they come from) as well as a corresponding and distinguishing recreation management strategy; either Community, Destination, or Undeveloped. SMAs typically involve the NPS proposed wilderness areas, as well as any areas on NPS lands where wilderness characteristics will be maintained. SRMA/SMAs will undergo further activity-level planning following the completion of the land use plan in either Recreation Area Management Plans (RAMP) and/or project plans.

In identifying SRMAs and prescribing the management regime for each, and to the extent feasible with the information on-hand, a benefits-based management (BBM) approach is used. BBM or "beneficial outcomes" planning focuses on the outcomes of recreation and leisure activities to determine how the experiences benefit the visitor and uses this information as the premise for the planning process. BBM focuses on "why" people visit an area and participate in a particular activity. Recent visitor surveys as well as public scoping comments and input from cooperating entities were used to develop the appropriate proposed recreation strategy for each SRMA.

Recreation Management Strategies

As stated previously, each SRMA identified will have a distinct, primary recreation-tourism market as well as a corresponding and distinguishing recreation management strategy. For each SRMA selected, that primary market-based strategy would be to manage for one of three possibilities:

Community recreation-tourism market ~ a community or communities dependent on public lands recreation and/or related tourism use, growth, and/or development. Major investments in facilities and visitor assistance are authorized within SRMAs where BLM's strategy is to target demonstrated community recreation-tourism market demand. Here, recreation management actions are geared toward meeting primary recreation-tourism market demand for specific activity, experience, and benefit opportunities. They are produced by maintaining prescribed

natural resource and/or community setting character and by structuring and implementing management, marketing, monitoring, and administrative actions accordingly.

Destination recreation-tourism market ~ national or regional recreation-tourism visitors and other constituents who value public lands as recreation-tourism destinations. Major investments in facilities and visitor assistance are authorized within SRMAs where BLM's strategy is to target demonstrated destination recreation-tourism market demand. Here, recreation management actions are geared toward meeting primary recreation-tourism market demand for specific activity, experience, and benefit opportunities. These opportunities are produced through maintenance of prescribed natural resource setting character and by structuring and implementing management, marketing, monitoring, and administrative actions accordingly.

Undeveloped recreation-tourism market ~ national, regional, and/or local recreation-tourism visitors, communities, or other constituents who value public lands for the distinctive kinds of dispersed recreation produced by the vast size and largely open, undeveloped character of their recreation settings. Major investments in facilities are excluded within SRMAs where BLM's strategy is to target demonstrated undeveloped recreation-tourism market demand. Here, recreation management actions are geared toward meeting primary recreation-tourism market demand to sustain distinctive recreation setting characteristics; however, major investments in visitor services are authorized both to sustain those distinctive setting characteristics and to maintain visitor freedom to choose where to go and what to do—all in response to demonstrated demand for undeveloped recreation.

While Destination and Community SRMAs are targeting for demands that may require major facilities and visitor assistance as stated above, Undeveloped SRMAs target for a demand that may requires primarily visitor services, not major facilities, to sustain distinctive settings and maintain the unstructured, freedom to choose activities appropriate in undeveloped settings. It should be noted that "visitor freedom to choose where to go and what to do" does not mean freedom from rules, regulations, travel restrictions, etc., but it refers to the visitors' ability to choose from a variety of unstructured, dispersed recreation activities and locations, versus choosing more structured recreation opportunities tied to specific places and activities in the other two types of SRMAs.

RECREATION MANAGEMENT ZONES

Within each SRMA, one or more potential Recreation Management Zones (RMZs) were identified, with each zone providing a particular recreation niche within the larger targeted recreation-tourism market strategy. (See Maps 2.7, 2.16, 2.25, and 2.34 for SRMAs with RMZs in the Arizona Strip Proposed Plan/Final Environmental Impact Statement [FEIS]). Each RMZ was characterized by a description of its desired outcomes (management objective(s), benefits, experiences, activities) and setting prescriptions (physical, social, and administrative conditions required to produce the outcomes.[see Appendix 3.H, Recreation Opportunity Spectrum, in the

Proposed Plan/FEIS]) Each RMZ within a SRMA is thus presented to show what the targeted activities would likely be, the potential experiences derived from participation, and the possible benefits to be realized. Additionally, an activity planning framework (see below) was described that addresses basic but broad types of recreation actions (management, marketing, monitoring, and administration) that will be needed to achieve desired outcomes.

EXTENSIVE RECREATION MANAGEMENT AREAS

Areas not delineated as a SRMA was identified as one or more ERMAs, which will primarily provide for the wide variety of dispersed recreation activities. Only a custodial level of management will be performed to address visitor health and safety, user conflicts and resource protection issues; only project plans would be developed. Therefore, actions within ERMAs are generally implemented directly from land use plan decisions. Land use plan decisions identified in the various sections of Chapter 2, Table 2.1, for Recreation and Visitor Services include recreation management objectives for all ERMAs, while Table 2.4 includes custodial recreation management, marketing, monitoring, and administrative support actions.

ACTIVITY PLANNING FRAMEWORK

The activity planning framework is intended to outline the essential conditions or actions needed to begin implementing the management of new SRMAs. This section addresses the framework for all actions to be taken by BLM and its collaborating community recreation-tourism providers who affect both recreation setting character and the kinds of recreation opportunities being produced in SRMAs. The framework addresses recreation management, marketing, monitoring, and administrative support actions necessary to achieve the various explicitly stated recreation management objectives and setting prescriptions found in the tables below.

Unless the essential conditions or structure are met, neither management objectives nor prescribed recreation setting character can be achieved because implementing actions are the engine that makes everything happen. In other words, "What are the primary types of actions to which BLM and its collaborating providers must commit so that planned recreation management objectives and recreation setting prescriptions will, in fact, be achieved?" Much of this structure is found in the Chapter 2, Table 2.14a Recreation and Visitor Services under Part C, Actions to Achieve and Allowable Uses of the Proposed Plan/FEIS. Additionally, the following content supplements the Chapter 2 content.

RECREATION-TOURISM SERVICE DELIVERY SYSTEM

To implement land use plan decisions within the SRMAs, a recreation-tourism service delivery system must be in place and engaged. The delivery system is that combination of public lands and adjoining service communities, including local governments and service providing businesses through which recreation and visitor services are delivered for one or more Special

Recreation Management Areas to both visitors and affected community residents. Because BLM is not the only provider of essential recreation and visitor services for the Monument, the focus of the system must include other service providers within adjoining service communities upon whom visitors and community residents alike depend.

The recreation-tourism delivery system for the Monument SRMAs involves more than just programs and activities provided on public lands. In addition to the BLM, the Forest Service and National Park Service, local counties, such as Mohave County in Arizona, Washington County in Utah and Clark County in Nevada, as well as American Indian Tribes, such as the Paiute, Hopi, and Hualapai, also contribute to recreation-tourism delivery, primarily through the management of access to and through landscapes. State governments in Arizona and Utah also play important roles in various facets of recreation delivery, including the management of game and fish and recreation activities on state trust lands, creation and funding of grant programs that enhance OHV and non-motorized recreation opportunities, and providing state law concerning vehicle-related licensing.

For the Monument SRMAs, local communities such as Littlefield, Scenic, Beaver Dam, Arizona; Mesquite, Bunkerville, Overton, Nevada; St. George, Hurricane, Washington, Santa Clara, and Hildale, Utah; and Colorado City, Fredonia, and Beaver Dam, Arizona will continue to contribute to the delivery of recreation-tourism opportunities to local, regional, national, and international visitors and residents.

Non-government recreation providers also play an important role in delivering recreation-tourism outcomes. Many local and regional businesses provide for a variety of direct recreation opportunities in the areas identified as SRMAs that enable customers to realize specific recreation experience outcomes via numerous commercial and competitive activities or events. Many other private sector businesses also provide indirectly, or 'off-site', to the recreation-tourism delivery, such as local bike shops, OHV dealerships, outdoor equipment retailers, hotels, and restaurants. Taken all together, recreation-tourism opportunities on the Arizona Strip are influenced, guided, constrained, and managed by many providers.

In implementing land use plan decisions for SRMAs, collaborative efforts with other key providers will be essential to achieving desired outcomes. Various types of cooperating agreements will be developed to forge sustainable service partnerships with these providers. Additionally, other existing or new "opportunistic" partnerships with users, interest groups, and NGOs will be developed, restructured, expanded, or otherwise tailored to fit within these overarching agreements among all key affected providers.

IMPLEMENTATION OF ESSENTIAL ACTIONS

Following the completion of the land use plan, a RAMP could be developed for each SRMA through a public process. RAMP content will address the variety of specific actions that BLM,

NPS and other key collaborating recreation-tourism providers within adjoining communities will undertake to achieve the production of recreation opportunities and resulting attainment of targeted experience and benefit outcomes.

Through the development of RAMPs for SRMAs, the BLM will integrate and constrain all of the traditional recreation-related programs and initiatives (e.g., OHVs and transportation, rivers and trails, permits and fees, concessions management, accessibility, interpretation, facility management, VRM, etc.) to address only those essential functional actions required to achieve planned outcomes.

Implementing actions, whether in RAMPs, developed directly from the Approved Plan, or developed adaptively during implementation, will need to conform to the overall management framework established by the Plan. In other words, as sets of more specific management actions are developed during activity planning, each and every action will need to conform to the planning criteria, laws, regulations, policies, and planning allocations. Additionally specific management actions need to conform with State and local provider laws and policies that pertain to activities on public lands.

To better focus on achieving integration and balance of the essential implementation actions, BLM will shift the operational framework from the more traditional approach of managing individual recreation programs as discrete objects to the following four functional areas of recreation and visitor services.

MANAGEMENT (of resources, visitors, and facilities [i.e., developed recreation sites, roads and trails, recreation concessions, etc.]):

Many of the recreation programs listed above involve recreation management actions, but, in a benefits-based SRMA, only those actions which, produce targeted outputs (i.e., maintain or enhance settings) and facilitate the attainment of targeted outcomes will be considered essential. Planned management programs and actions for SRMAs will be constrained by the management framework of the Approved Plan, specifically the Recreation and Visitor Services section. Planned management programs and actions will be held accountable for how they impact recreation setting character and the ability of those settings to produce targeted recreation opportunities.

Additionally, planned travel management actions, including route designation actions, will be constrained by recreation management objectives and setting prescriptions, as well as other management objectives related to sensitive resources. Likewise, planned travel-related engineering construction and maintenance actions will be guided in part by Travel Management Area setting prescriptions (Appendix 2.S Travel Management Areas, Part C, Route Construction and Maintenance Standards) that are integrated with RMZ setting prescriptions.

***MARKETING* (*including outreach, information and education, promotion, interpretation, environmental education, and other visitor services*):**

Marketing actions must support and compliment planned management actions. Marketing seeks to connect a customer with a product. In the case of managing for beneficial outcomes on public lands, marketing will connect the visitor with a desired setting and set of activities that will facilitate the realization of desired experiences and benefits.

As part of marketing, definitive information about recreation setting character and activity, experience, and benefit opportunities will be integrated into BLM's own information and other outreach media. The BLM will also work more closely with industry media through collaborative efforts to add definitive content to existing and planned industry outreach media and messages to ensure that promotional pieces match customers with the opportunities they seek rather than sell them what media wants. It will be essential that all entities involved with marketing, both BLM and industry media, know and understand:

- how each SRMA is targeting a specific recreation-tourism market and who that market is and where it is located;
- how each such market has one or more specific recreation niches that prescribe RMZ-specific recreation setting characteristics critical to the production of specific outcomes of activity, experience, and benefits; and
- what the ramifications of "off-target" promotional efforts can be; and
- that only the marketing tools (e.g., information, promotion, education, interpretation, etc.) that are best suited for each locale, will be selected as implementing actions.

Monitoring (*including social, environmental, and administrative indicators and standards (including outreach, information and education, promotion, interpretation, environmental education, and other visitor services*):

Various monitoring frameworks will be available for BLM and its collaborating partners to implement specific planned monitoring actions. Monitoring recreation outcomes and prescribed recreation setting conditions is what will drive adaptive management. Monitoring will measure outcomes and settings indicators gauge if, when, and how to readjust management and marketing actions to achieve standards set for those indicators (i.e., monitoring indicators and standards will be extracted directly from the outcomes-based management objectives and setting prescriptions).

Limits of Acceptable Change (LAC) will be the primary framework used to clarify the identity of other indicators, inventory the indicators, evaluate data and set standards for the indicators, and monitor selected indicator sites over time to assess the condition and trend of various recreation settings. In addition to LAC, visitor satisfaction and preference surveys will be used to evaluate the success or failure achieving the objectives. BLM will use standard, approved

survey instruments while other providers may employ other methods to monitor conditions and achievement of objectives.

In implementing specific monitoring actions, BLM's collaborating providers will be encouraged to assist by providing visitor and community assessments. A monitoring plan will facilitate achieving the essential conditions needed for coordinated, integrated, efficient monitoring actions to occur.

ADMINISTRATIVE SUPPORT (regulations; permits and fees, including use restrictions where necessary and appropriate; recreation concessions; fiscal; data management; and customer liaison):

Administrative actions, such as those listed above, will be implemented only if they ensure that they:

- support rather than lead the management, marketing, and monitoring actions
- do not thwart the attainment of targeted experience and beneficial outcomes,
- fit within recreation setting prescriptions
- are all complementary and balanced with each other, and
- are limited to only those necessary to achieve all of the above.

APPENDIX K

TRAVEL MANAGEMENT AREAS, TRANSPORTATION PLAN CONTENTS, AND APPROPRIATE ROUTE CONSTRUCTION AND MAINTENANCE STANDARDS BY TRAVEL MANAGEMENT AREA

APPENDIX K: TRAVEL MANAGEMENT AREAS, TRANSPORTATION PLAN CONTENTS, AND APPROPRIATE ROUTE CONSTRUCTION AND MAINTENANCE STANDARDS BY TRAVEL MANAGEMENT AREA

TRAVEL MANAGEMENT AREAS

Comprehensive travel management planning addresses all resource use aspects (such as recreational, traditional, casual, agricultural, commercial, and educational) and accompanying modes and conditions of travel on the public lands. In the Approved Plan, three Travel Management Areas (TMAs; polygons) are delineated. Acceptable modes of travel for each TMA (including over-land and fly-in access [remote airstrips]) are identified in the Approved Plan as Allowable Uses. In developing these areas, the following components were considered:

a. Management units developed in the plan
b. Consistency with all resource program goals and objectives;
c. Primary travelers;
d. Objectives for allowing travel in the area;
e. Setting characteristics that are to be maintained (including recreation opportunity system and VRM settings); and
f. Primary means of travel allowed to accomplish the objectives and to maintain the setting characteristics.

A transportation plan will be developed within 3-5 years that will coordinate the implementation of the Travel Management and Transportation Facilities decisions over the life of the Plan. The potential contents of the transportation plan are shown below. The transportation plan will also include Appropriate Route Construction and Maintenance Standards by TMA, also shown below.

TRANSPORTATION PLAN CONTENTS

DESIGNATED TRAVEL MANAGEMENT SYSTEM

Implementation and management of the defined travel management network (a system of areas, roads and/or trails that will be available for public use, and the specific limitations placed on use) will be documented in the transportation plan including, as a minimum, the following components:

a. A map that displays and describes the intended use of the individual geographic units within the planning area and displays roads and trails for all travel modes.

b. A listing of specific road types and designations such as Federal, state, county, and Tribal roads, BLM administered/maintained roads, and BLM public roads.
c. A listing of roads in congressionally designated conservation units, Presidential conservation designations, and administrative conservation designations.
d. Definitions and additional limitations for specific roads and trails (defined in 43 CFR 8340.0-5(g)).
e. Criteria to add new roads or trails and to specify limitations.
f. A set of guidelines for management, monitoring, and maintenance of the system.
g. A set of indicators to guide future plan maintenance, amendments, or revisions related to travel management network.
h. A list of needed easements and rights-of-way (to be issued to the BLM or others) to maintain the existing road and trail network providing public land access.
i. A schedule for periodic review of travel management networks to ensure that current resource and travel management objectives are being met (see 43 CFR 8342.3).

Table K.1. Route Construction and Maintenance Standards							
Appropriate Route Construction and Maintenance Standards by TMA							
Asset Type[1] and Access Vehicle Type	Route Type[2]	Route Width[3] (ft)	Maintenance Intensity[4]	Maintenance Frequency	Speed (mph)	Comments	Hiking, Equestrian, and Bicycle Types
Rural TMA							
State, Federal	Primary Paved, Secondary Paved	Varies	High standards		55-75	ADOT responsibility	Native tread surface to nonnative tread for interpretive trails
Road-all vehicle types	Primary Unpaved, Secondary Unpaved	14-28	3, 5	Annually	20-50	Mainly County and BLM routes	
Primitive Road-high clearance or 4X4	Tertiary	10 or two-track	1	As needed	10-15	Maintenance is typically as needed, site-specific	
Trail-hiking, biking, motorcycle or equestrian	Single Track	1.6	3	Annually	≤40 M ≤15 NM	Use generally year-round	
Non-system	Closed, Reclaiming, Abandoned	--	0	None	--	Routes to be closed and rehabilitated	
Backways TMA							
Road-all vehicle types	Primary Unpaved, Secondary Unpaved	14-20	3, 5	Annually	40-50	Mainly County and BLM/NPS routes	Native tread surface to nonnative tread for interpretive trails
Primitive Road-high clearance or 4X4	Tertiary	10 or two-track	1	As needed	5-15	Maintenance is typically as needed, site-specific	
Trail-hiking, biking, motorcycle or equestrian	Single Track	1.6	1, 3	As needed	≤40 M ≤15 NM	Use generally year-round	
Non-system		--	0	None	--	Routes to be closed and rehabilitated	
Specialized TMA							
Road-all vehicle types	Secondary Unpaved	14	3	Annually	20-30	Mainly BLM/NPS routes	Native tread surface, widths to be determined
Primitive Road-high clearance or 4X4	Tertiary	10 or two-track	1	As needed	5-15	Maintenance is typically as needed and/or site-specific	
Trail-hiking, biking, motorcycle or equestrian	Single Track	1.6	1, 3	As needed	≤40 M ≤15 NM	Use generally year-round	
Non-system	Closed, Reclaiming, Abandoned	--	0	None	--	Routes to be closed and rehabilitated	

Table K.1. Route Construction and Maintenance Standards

Appropriate Route Construction and Maintenance Standards by TMA							
Asset Type[1] and Access Vehicle Type	Route Type[2]	Route Width[3] (ft)	Maintenance Intensity[4]	Maintenance Frequency	Speed (mph)	Comments	Hiking, Equestrian, and Bicycle Types
Primitive TMA							
Primitive Road-high clearance or 4X4	Tertiary	10 or two-track	1	As needed	5-15	Administrative motorized use and open to non-motorized public use. Maintenance is typically as needed, site-specific	Native tread surface, widths to be determined
Trail-hiking or equestrian	Single Track	1.6	1, 3	As needed	≤40 M ≤15 NM	Use generally year-round	
Non-system	Closed, Reclaiming, Abandoned	--	0	None	--	Routes to be closed and rehabilitated	

1. Asset type: From Instruction Memorandum No. 2006-173, Implementation of Roads and Trails Terminology Report:
Road: A linear route declared a road by the owner, managed for use by low-clearance vehicles having four or more wheels, and maintained for regular and continuous use.
Primitive Road: A linear route managed for use by four-wheel drive or high-clearance vehicles. These routes do not normally meet any BLM road design standards.
Trail: A linear route managed for human-powered, stock, or off-highway vehicle forms of transportation or for historical or heritage values. Trails are not generally managed for use by four-wheel drive or high-clearance vehicles.

2. Route Type: Derived from formal route inventory, which uses these standard types for inventory on BLM and U.S. Forest Service jurisdictions and for Arizona State Trust Lands.

3. Route Width: Width of travel surface only. Does not include associated ditches, bridges, culverts, route cut and fill areas, etc.

4. Route Maintenance Intensities :

Level 0 - Maintenance Description: Existing routes that will no longer be maintained and no longer be declared a route. Routes identified as Level 0 are identified for removal from the Transportation System entirely. **Maintenance Objectives**: No planned annual maintenance; Meet identified environmental needs; No preventive maintenance or planned annual maintenance activities

Level 1 - Maintenance Description: Routes where minimum (low intensity) maintenance is required to protect adjacent lands and resource values. These roads may be impassable for extended periods of time. **Maintenance Objectives**: Low (Minimal) maintenance intensity; Emphasis is given to maintaining drainage and runoff patterns as needed to protect adjacent lands. Grading, brushing, or slide removal is not performed unless route bed drainage is being adversely affected, causing erosion; Meet identified resource management objectives; Perform maintenance as necessary to protect adjacent lands and resource values; No preventive maintenance; Planned maintenance activities limited to environmental and resource protection; Route surface and other physical features are not

Table K.1. Route Construction and Maintenance Standards							
Appropriate Route Construction and Maintenance Standards by TMA							
Asset Type[1] and Access Vehicle Type	Route Type[2]	Route Width[3] (ft)	Maintenance Intensity[4]	Maintenance Frequency	Speed (mph)	Comments	Hiking, Equestrian, and Bicycle Types
maintained for regular traffic **Level 2** - *RESERVED FOR POSSIBLE FUTURE USE* **Level 3 - Maintenance Description:** Routes requiring moderate maintenance due to low volume use (e.g., seasonally or year-round for commercial, recreation, or administrative access). Maintenance Intensities may not provide year-round access but are intended to generally provide resources appropriate to keep the route in use for the majority of the year. **Maintenance Objectives**: Medium (Moderate) maintenance intensity; Drainage structures will be maintained as needed. Surface maintenance will be conducted to provide a reasonable level of riding comfort at prudent speeds for the route conditions and intended use. Brushing is conducted as needed to improve sight distance when appropriate for management uses. Landslides adversely affecting drainage receive high priority for removal; otherwise, they will be removed on a scheduled basis; Meet identified environmental needs; Generally maintained for year-round traffic; Perform annual maintenance necessary to protect adjacent lands and resource values; Perform preventive maintenance as required to generally keep the route in acceptable condition; Planned maintenance activities should include environmental and resource protection efforts, annual route surface; Route surface and other physical features are maintained for regular traffic **Level 4** - *RESERVED FOR POSSIBLE FUTURE USE* **Level 5 – Maintenance Description:** Routes for high (Maximum) maintenance due to year-round needs, high volume traffic, or significant use. Also may include routes identified through management objectives as requiring high Intensities of maintenance or to be maintained open on a year-round basis. **Maintenance Objectives**: High (Maximum) maintenance intensity; The entire route will be maintained at least annually. Problems will be repaired as discovered. These routes may be closed or have limited access due to weather conditions but are generally intended for year-round use; Meet identified environmental needs; Generally maintained for year-round traffic; Perform annual maintenance necessary to protect adjacent lands and resource values; Perform preventive maintenance as required to generally keep the route in acceptable condition; Planned maintenance activities should include environmental and resource protection efforts, annual route surface; Route surface and other physical features are maintained for regular traffic							

APPENDIX L

LIST OF PREPARERS

APPENDIX L: LIST OF PREPARERS

Those responsible for preparation of this Approved Plan are presented in the table below:

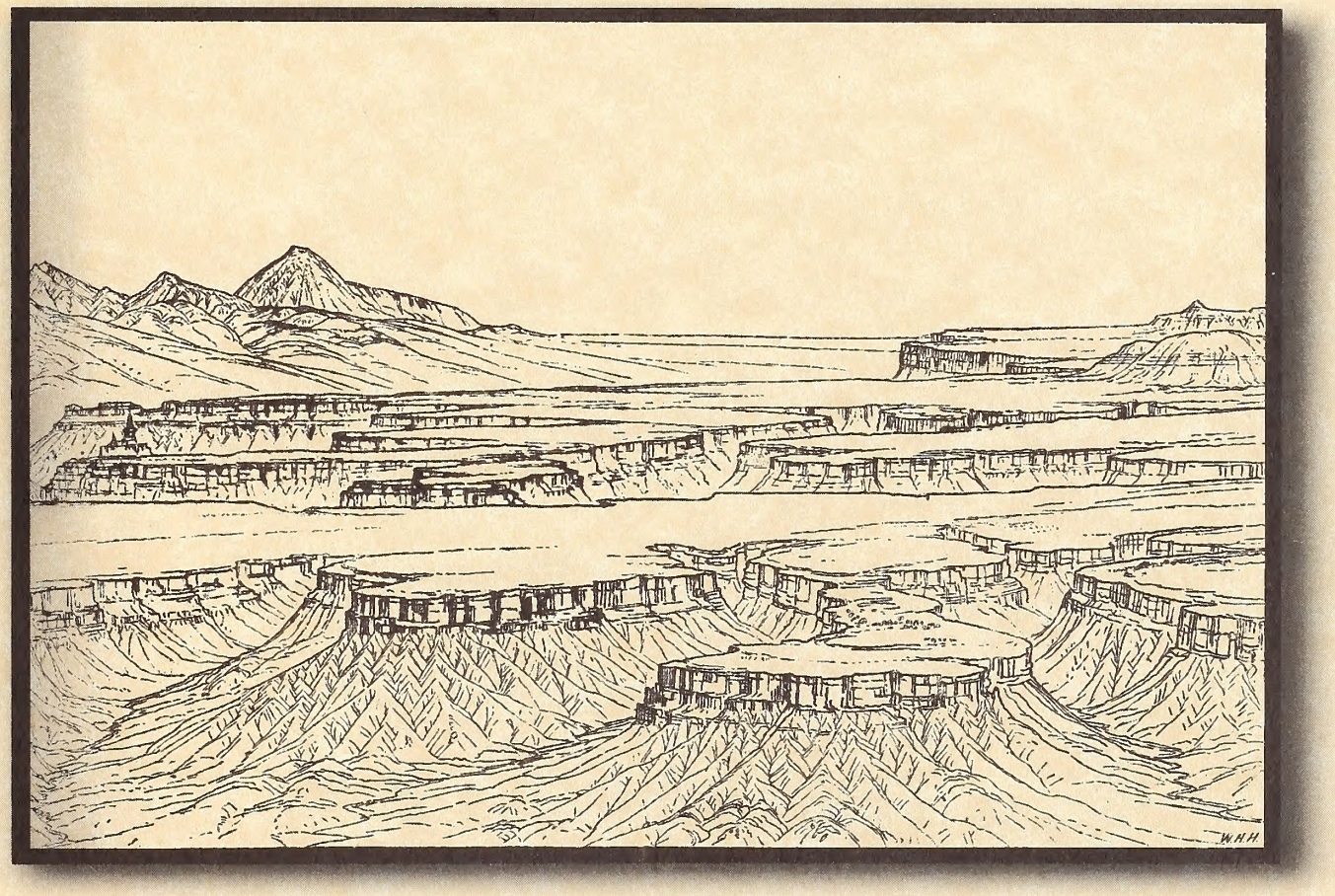
LIST OF PREPARERS					
Name	**Title**	**Agency**	**Assignment**	**Education**	**Years of Expertise**
Michelle Bailey	Recreation Planner	BLM	Recreation	B.S., Parks and Recreation Mgnt.	8 Years
Gloria Benson	Native American Coordinator	BLM	Cultural Resources (American Indian Resources)		26 years
Jonathan Boswell	GIS, GPS Consultant	GEO-MM&C	GIS Analysis and Data Development GPS Data Collection and Management Map/Graphics Development	A.A., General Studies	4 years
David Boyd	Public Affairs Specialist	BLM	Outreach, Editing, Scoping Report, Planning Bulletins, Technical Coordinator	B.S., Wildlife Biology M.A., Journalism	18 years
Hilary Boyd	Fire Ecologist	BLM	Fire Ecology (Occurrence, Risk)	B.S., Wildlife Biology M.S., Wildlife Science	11 years
Jeff Bradybaugh	Superintendent, Parashant	NPS	Management Overview, NPS Planning	M.S., Wildlife Science	25 years
Paula Branstner	Interpretive Specialist	NPS	Environmental Education and Interpretation	A.S., General Studies/ Occupational Therapy	19 years
Whit Bunting	Rangeland Management Specialist	BLM	Livestock Grazing, Vegetation (Rangelands)	B.S., Range Science	16 years
Todd Calico	GIS, GPS Consultant	TLC-GIS	GIS Analysis and Data Development GPS Data Collection and Management Map/Graphics Development	A.S., General Studies BIS., Natural Resources and Environmental Studies	6 Years
Lorraine Christian	Field Manager, Arizona Strip Field Office	BLM	Management Overview, Planning Overview	B.S., Wildlife and Fisheries Biology	22 years
Rody Cox	Geologist, Lead for Minerals Program and Paleontological Resources	BLM	Geology, Paleontology, Minerals (Leasable and Locatable Minerals, Mineral Materials)	B.A., Biology M.S., Geology	24 years
Dennis Curtis	Monument Manager, Parashant	BLM	Management Overview, Planning Overview	M.S., Geography	39 years
Tom Denniston	Wildlife Biologist	BLM	Wildlife Biology	B.S., Wildlife (Mgmt & Conservation)	3 years

LIST OF PREPARERS					
Name	**Title**	**Agency**	**Assignment**	**Education**	**Years of Expertise**
William Dickinson	Superintendent, Lake Mead NRA	NPS	Management Overview	B.A., Landscape Architecture	33 years
Timothy Duck	Ecologist	BLM	Forest Products, Ecozones, Ecology, Restoration	B.S., Ecology and Evolutionary Biology	26 years
Scott Florence	District Manager	BLM	Management Overview, Planning Overview	B.S. Range and Wildlife	31 years
Tom Folks	Recreation, Wilderness, Cultural Team Leader	BLM	Travel Management, Recreation, Visual Resources, Back Country Byways, National and Regional Trails, Wild and Scenic Rivers, Wilderness	B.S., Recreation Park Planning and Resource Management	31 years
Laurie Ford	Lands and Geological Sciences Team Lead	BLM	Management Overview, Lands and Realty, Utility and Communication Corridors		26 years
Becky Hammond	Manager, Arizona Strip FO	BLM	Management Overview, Geology	B.S., Geology M.S., Geology	20 years
Kathleen Harcksen	Assistant Manager Parashant	BLM	Management Overview, Vegetation (Forests and Woodlands, Riparian and Wetlands)	B.S., Natural Resource Management	32 years
Diana Hawks	Planning Coordinator	BLM	Planning Team Lead, Cultural Resources (Archaeological, Historic, and American Indian Resources), ACECs	B.S., Archaeology M.A., Archaeology	33 years
Michael Herder	Wildlife Team Leader	BLM	Fish and Wildlife, Special Status Species (Animals), ACECs, Management Overview	B.S., Wildlife Management B.A., Zoology M.A., Marine Biology	28 years
John Herron	Archaeologist	BLM	Cultural Resources (Archaeological and Historical Resources), ACECs	B.A., Archaeology, Ecology and Evolutionary Biology	31 years
Jim Holland	Management Assistant, Lake Mead NRA	NPS	Management Overview, Lands and Reality, Recreation, Planning Overview	B.S., Zoology & Botany M.S., Biology	29 years
Lee Hughes	Ecologist	BLM	Special Status Species (Plants), Vegetation (Riparian and Wetlands), ACECs	A.S., Forestry B.S., Fishery and Range Management	34 years
Lilian Jonas	Writer/Editor	EnviroSystems Management	Document Writing and Editing	B.S., Biology M.A., Applied Sociology Ph.D., Sociology	17 years

LIST OF PREPARERS					
Name	**Title**	**Agency**	**Assignment**	**Education**	**Years of Expertise**
Dave Kiel	GIS Specialist, Recreation Planner	BLM	GIS Data Development GIS Analysis Map/Graphics Development	B.S., Geography	19 years
Shirley Kodele	Budget Technician	NPS	Comment Analysis Document Preparation GIS Assistance		13 years
Marisa Monger	GIS Specialist	BLM	GIS Data Development GIS Analysis Map/Graphics Development	B.A., Psychology	9 years
Kenneth Moore	Lead Natural Resource Specialist	BLM	Access, Vegetation (Forests and Woodlands), Forest Products, Restoration	B.S., Forest Management	38 years
Rosie Pepito	Cultural Resource Manager, Lake Mead NRA	NPS	Cultural Resources (Archaeological, Historical, and American Indian Resources)		21 years
Linda Price	Standards and Guides Team Leader, Vermilion Manager	BLM	Standards for Rangeland Health, Management Overview	B.S., Ecology	17 years
Robert Sandberg	Range Team Leader	BLM	Range and Vegetation, Management Overview	B.S., Botany & Zoology	30 years
Kathy Seegmiller	Information Technology Specialist	BLM	Comment Analysis Database Management		26 years
Phillip Seegmiller	Rangeland Management Specialist	BLM	Vegetation (Forests and Woodlands, Rangelands, Riparian and Wetlands)	B.S., Outdoor Recreation/Range Management	27 years
Darla Sidles	Superintendent, Parashant	NPS	Lead Planner, Management Overview	B.A., Business Administration	21 years
Robert Smith	Hazmat, Soil, Water and Air Programs Lead	BLM	Air Quality, Water (Ground and Surface Water) Soil Resources, Health and Safety (Hazardous Materials)	B.S., Soil Science Graduate Certificate in Hazardous Waste Land Management	32 years
Richard Spotts	Environmental Coordinator	BLM	NEPA Compliance Review	B.A., Political Science J.D., Law	25 years
Jo Starr	GIS Specialist	NPS	GIS Data Development GIS Analysis	B.S., Natural Resources and Environmental Studies	9 years

LIST OF PREPARERS					
Name	**Title**	**Agency**	**Assignment**	**Education**	**Years of Expertise**
Roger Taylor	District Manager, Arizona Strip	BLM	Management overview	B.S., Range Management	40 years
Kent Turner	Resource Management Chief, Lake Mead NRA	NPS	Management overview	B.S., Biology	27 years
Ron Wadsworth	Lead Law Enforcement Officer	BLM	Public Safety (Crime), Law Enforcement	B.S., Wildlife Biology	22 years
L.D. Walker	Noxious Weed Coordinator	BLM	Vegetation (Noxious Weeds), Fish and Wildlife (Invasive Species), Wild Horses and Burros	B.S., Zoology	30 years
Gary Warshefski	Assistant Superintendent, Lake Mead NRA	NPS	Management overview	B.S., Forestry M.S., Public Administration	30 years
Les Weeks	Consultant, Route Evaluations	ARS, Inc	Transportation/Access	B.A., Ecosystems Analysis M.A., Biogeography	25 years
Aaron Wilkerson	Forester	BLM	Restoration, Forestry	B.S., Forestry	7 years
Ericka Wilkerson	Administrative Assistant	Contractor	Comment Analysis Document Preparation	B.S., Criminal Justice	12 years
Kari Yanskey	Botanist	NPS	Vegetation (Forests and Woodlands, Rangelands, Riparian and Wetlands), Special Status Species (Plants)	B.S., Biology	24 years

Glossary, References Cited, Index, and Abbreviations and Acronyms



"The Arizona Strip is one of the most remote regions on earth, It is five million acres of no electricity, no phone lines, and very little water. The lack of water is what kept it remote, plus the reality that the Grand Canyon defines its southern border. The fact that there are 280 miles of canyon with no highway bridge means there's little reason for anyone to pass that way except out of curiosity. And even then it requires a stout vehicle and an even stouter heart."

Lyman Hafen, 2001

GLOSSARY, REFERENCES CITED, INDEX, AND ABBREVIATIONS AND ACRONYMS

GLOSSARY

-A-

Activity Plan: A type of implementation plan (see Implementation plan); an activity plan usually describes multiple projects and applies best management practices to meet land use plan objectives. Examples of activity plans include interdisciplinary management plans, habitat management plans, recreation area management plans, and allotment management plans.

Administrative Use: Official use related to management and resources of the public lands by Federal, State or local governments or non-official use sanctioned by an appropriate authorization instrument, such as right-of-way, permit, lease, or maintenance agreement.

Administrative Route: routes that are limited to administrative (official or authorized) users only.

Administrative Purposes: administrative use functions involving regular maintenance or operation of facilities or programs.

Air Quality: Refers to standards for various classes of land as designated by the Clean Air Act of 1978.

Air Quality Standards: The allowable concentrations of air pollutants in the ambient (public outdoor) air. National ambient air quality standards are based on the air quality criteria and divided into primary standards (allowing an adequate margin of safety to protect the public health) and secondary standards (allowing an adequate margin of safety to protect the public welfare). Welfare is defined as including (but not limited to) effects on soils, water, crops, vegetation, human-made materials, animals, wildlife, weather, visibility, climate, and hazards to transportation, as well as effects on economic values and on personal comfort and well-being.

All -Terrain Vehicle (ATV): A wheeled or tracked vehicle, other than a snowmobile or work vehicle, designed primarily for recreational use or for the transportation of property or equipment exclusively on undeveloped road rights of way, marshland, open country or other unprepared surfaces.

Allotment: An area of land where one or more livestock operators graze their livestock. Allotments generally consist of BLM lands but may also include other federally managed, state owned, and private lands. An allotment may include one or more separate pastures. Livestock numbers and periods of use are specified for each allotment.

Allotment Management Plan: A written program of livestock grazing management, including supportive measures if required, designed to attain specific management goals in a grazing allotment.

Amendment: The process for considering or making changes in the terms, conditions, and decisions of approved RMPs or MFPs. Usually only one or two issues are considered that involve only a portion of the planning area.

Animal Unit Month (AUM): A standardized measurement of the amount of forage necessary for the sustenance of one cow unit or its equivalent for 1 month, approximately 800 pounds of forage.

Appeal: Application for review of an implementation decision by a higher administrative level.

Area of Critical Environmental Concern (ACEC): Areas within the public lands where special management attention is required to: (1) protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources, or other natural systems or processes, or (2) protect life and safety from natural hazards.

Arroyo: A term applied in the arid and semiarid regions of the southwestern United States to the small, deep, flat-floored channel or gully of an intermittent stream usually with vertical or steeply cut banks of unconsolidated

material at least 2 feet high; it is usually dry, but may be transformed into a temporary watercourse or short-lived torrent after heavy rainfall

Aspect: (1) the visual first impression of vegetation at a particular time or seen from a specific point. (2) The predominant direction of the slope of the land.

Assessment: The act of evaluating and interpreting data and information for a defined purpose.

Avoidance Areas: Areas with sensitive resource values where rights-of-way and Section 302 permits, leases, and easements would be strongly discouraged. Authorizations made in avoidance areas would have to be compatible with the purpose for which the area was designated and not otherwise feasible on lands outside the avoidance area.

-B-

Back Country Byways: A component of the national scenic byway system which focuses primarily on corridors along back country roads which have high scenic, historic, archaeologic, or other public interest values. The road may vary from a single track bike trail to a low speed, paved road that traverses back country areas.

Basalt: Fine-grained, dark-colored igneous rock that is either intrusive or extrusive.

Base Metal: A metal inferior in value to gold and silver, a term generally applied to the commercial metals such as copper and lead.

Basin and Range: Topography characterized by a series of tilted fault block mountain ranges and broad intervening basins.

Basin and Range Physiographic Province: A province in the southwestern United States characterized by a series of tilted fault blocks forming longitudinal ridges or mountains and broad intervening basins.

Beneficial Outcomes: Also referenced as "Recreation Benefits;" improved conditions, maintenance of desired conditions, prevention of worse conditions, and the realization of desired experiences.

Biological Assessment: The gathering and evaluation of information on proposed endangered and threatened species and critical habitat and proposed critical habitat. Required when a management action potentially conflicts with endangered or threatened species, the biological assessment is the way federal agencies enter into formal consultation with the Fish and Wildlife Service and describe a proposed action and the consequences to the species the action would affect.

Biotic Communities: The assemblage of native and exotic plants and of a particular site or landscape, including microorganisms, fungi, algae, vascular and herbaceous plants, invertebrates, and vertebrates. These assemblages and their biotic and abiotic relationships serve landscape and watershed functions by promoting soil properties supporting water infiltration, recycling and transfer, species survival, and sustainable population dynamics.

Biological Crusts (also known as microbiotic, microphytic, cryptogamic, or cryptobiotic crusts/soils): Biological communities that form a surface layer or thin crust on some soils. These communities consist of cyanobacteria (blue-green bacteria), microfungi, mosses, lichens, and green algae and perform many important functions, including fixing nitrogen and carbon, maintaining soil surface stability, and preventing erosion. These crusts are slow to recover after disturbance, requiring 40 years or more to recolonize small areas.

Breccia: A coarse-grained rock composed of large broken rock fragments that are cemented together in a finer-grained matrix and that can be of any composition, origin or mode of accumulation.

Browse: To browse (verb) is to graze a plant; also, browse (noun) is the tender shoots, twigs and leaves of trees and shrubs often used as food by livestock and wildlife.

-C-

Cambrian: The oldest of the periods of the Paleozoic Era; also the system of strata deposited during that period.

Candidate species: Any species included in the *Federal Register* notice of review being considered for listing as threatened or endangered by the U.S. Fish and Wildlife Service.

Canopy: The uppermost layer consisting of the crowns of trees or shrubs in a forest or woodland.

Carrying Capacity: The maximum stocking rate possible without damaging vegetation or related resources.

Categorical Exclusion: A category of actions (identified in agency guidance) that do not individually or cumulatively have a significant effect on the human environment, and for which neither an environmental assessment nor an Environmental Impact Statement is required.

Cave Resource: Any naturally occurring void, cavity, recess, or system of interconnected passages beneath the surface of the earth or within a cliff or ledge, including any cave resource therein, that is large enough to permit a person to enter, whether the entrance is excavated or naturally formed. Also included is any natural pit or sinkhole.

Cenozoic: The most recent era of geologic history (65 million years ago until the present) during which the world's modern landforms, animals, and plants came into being.

Channel: An open conduit either naturally or artificially created which periodically or continuously contains moving water or forms a connecting link between two bodies of water.

Chaparral: A vegetation community consisting of dense and often thorny shrubs and small trees.

Clean Air Act: Federal legislation governing air pollution. Prevention of Significant Deterioration above legally established levels.

Closed: Generally denotes that an area is not available for a particular use or uses; refer to specific definitions found in law, regulations, or policy guidance for application to individual programs. For example, 43 CFR 8340.0-5 sets forth the specific meaning of "closed" as it relates to off-highway vehicle use, and 43 CFR 8364 defines "closed" as it relates to closure and restriction orders.

Closed OHV Area Designation: an area where off-road vehicle use is prohibited. Use of off-road vehicles in closed areas may be allowed for certain reasons; however, such use shall be made only with the approval of the authorized officer. (43 CFR 8340.0–5 (h))

Code of Federal Regulations (CFR): The official, legal tabulation or regulations directing federal government activities.

Collaboration : A cooperative process in which interested parties, often with widely varied interests, work together to seek solutions with broad support for managing public and other lands. This may or may not involve an agency as a cooperating agency.

Community: An assemblage of plant and animal populations in a common spatial arrangement.

Community Recreation-Tourism Market: A community or communities dependent on public lands recreation and/or related tourism use, growth, and/or development. Major investments in facilities and visitor assistance are authorized within SRMAs where BLM's strategy is to target demonstrated community recreation-tourism market demand. Here, recreation management actions are geared toward meeting primary recreation-tourism market demand for specific activity, experience, and benefit opportunities. These opportunities are produced through maintenance of prescribed natural resource and/or community setting character and by structuring and implementing management, marketing, monitoring, and administrative actions accordingly.

Conformance: That a proposed action shall be specifically provided for in the land use plan or, if not specifically mentioned, shall be clearly consistent with the goals, objectives, or standards of the approved land use plan.

Conservation Agreement: A formal signed agreement between the U.S. Fish and Wildlife Service or National Marine Fisheries Service and other parties that implements specific actions, activities, or programs designed to eliminate or reduce threats or otherwise improve the status of a species. Conservation agreements can be developed at a State, regional, or national level and generally include multiple agencies at both the State and Federal level, as well as tribes. Depending on the types of commitments the BLM makes in a conservation agreement and the level of signatory authority, plan revisions or amendments may be required prior to signing the conservation agreement, or subsequently in order to implement the conservation agreement.

Conservation Strategy: A strategy outlining current activities or threats that are contributing to the decline of a species, along with the actions or strategies needed to reverse or eliminate such a decline or threats. Conservation strategies are generally developed for species of plants and animals that are designated as BLM Sensitive species or that have been determined by the Fish and Wildlife Service or National Marine Fisheries Service to be Federal candidates under the Endangered Species Act.

Consistency: The proposed land use plan does not conflict with officially approved plans, programs, and policies of tribes, other Federal agencies, and state, and local governments to the extent practical within Federal law, regulation, and policy.

Cooperating Agency: Assists the lead Federal agency in developing an Environmental Analysis or Environmental Impact Statement. The Council on Environmental Quality regulations implementing NEPA define a cooperating agency as any agency that has jurisdiction by law or special expertise for proposals covered by NEPA (40 CFR 1501.6). Any tribe or Federal, State, or local government jurisdiction with such qualifications may become a cooperating agency by agreement with the lead agency.

Corridor: A wide strip of land within which a proposed linear facility could be located.

Council on Environmental Quality (CEQ): An advisory council to the President of the United States established by the national Environmental Policy Act of 1969. It reviews Federal programs for their effect on the environment, conducts environmental studies, and advises the president on environmental matters.

Cover: Any form of environmental protection that helps an animal stay alive (mainly shelter from weather and concealment from predators).

Critical Habitat: An area occupied by a threatened or endangered species on which are found those physical and biological features (1) essential to the conservation of the species, and (2) which may require special management considerations or protection@.

Cultural Resources: Nonrenewable elements of the physical and human environment including archaeological remains (evidence of prehistoric or historic human activities) and sociocultural values traditionally held by ethnic groups (sacred places, traditionally used raw materials, etc.).

Cultural Site: Any location that includes prehistoric and/or historic evidence of human use, or that has important sociocultural value.

Cumulative Impact/Effect: The impact on the environment that results from the incremental impact of the action when added to other past, present, or reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

-D-

Designated Roads and Trails: Specific roads and trails identified by the BLM (or other agencies) where some type of motorized vehicle use is appropriate and allowed either seasonally or yearlong.

Desired Condition: Description of those factors that should exist within ecosystems both to maintain their survival and to meet social and economic needs.

Desired Future Condition: A type of land use plan decision that is a broad statements of desired outcomes for a use.

Desired Outcomes: A type of land use plan decision expressed as a goal or objective.

Destination Recreation-Tourism Market: National or regional recreation-tourism visitors and other constituents who value public lands as recreation-tourism destinations. Major investments in facilities and visitor assistance are authorized within SRMAs where BLM's strategy is to target demonstrated destination recreation-tourism market demand. Here, recreation management actions are geared toward meeting primary recreation-tourism market demand for specific activity, experience, and benefit opportunities. These opportunities are produced through maintenance of prescribed natural resource setting character and by structuring and implementing management, marketing, monitoring, and administrative actions accordingly.

Director (BLM Director): The national Director of the BLM.

Dispersed/Extensive Recreation: Recreation activities of an unstructured type that are not confined to specific locations such as recreation sites. Example of these activities may be hunting, fishing, off-road vehicle use, hiking, and sightseeing.

Diversity: The relative abundance of wildlife species, plant species, communities, habitats, or habitat features per unit of area.

Drainage: The removal of excess water from land by surface or subsurface flow.

Drilling: The operation of boring a hole in the earth, usually for the purpose of finding and removing subsurface formation fluids such as oil and gas.

-E-

Easement: A right afforded a person or agency to make limited use of another's real property for access or other purposes.

Ecological Integrity: A measure of the health of the entire area or community based on how much of the original physical, biological, and chemical components of the area remain intact.

Ecological Site Inventory (ESI): The basic inventory of present and potential vegetation on BLM rangelands. Ecological site inventory uses soils, the existing plant community, and ecological site data to determine the appropriate ecological site for a specific area of rangeland.

Ecosystem: A complete, interacting system of living organisms and the land and water that make up their environment; the home places of all living things, including humans.

Ecological Zone: A zone in which similarities in ecological functions and conditions allow for the classification of large areas into ecological zones, or geographic areas that may be managed similarly. Ecological zones are primarily based on the geology, soils, hydrology, plants, and animals of the area. In many areas, there is a gradual gradient between ecological zones.

Emission: Effluent discharge into the atmosphere, usually specified by mass per unit time.

Endangered Species: A plant or animal species whose prospects for survival and reproduction are in immediate jeopardy, as designated by the Secretary of the Interior, and as is further defined by the Endangered Species Act.

Entry: An application to acquire title to public lands.

Environmental Assessment (EA): A concise public document that analyzes the environmental impacts of a proposed federal action and provides sufficient evidence to determine the level of significance of the impacts.

Environmental Impact Statement (EIS): A detailed written statement required by the National Environmental Policy Act when an agency proposes a major federal action significantly affecting the quality of the human environment.

Ephemeral Stream: A stream that flows only after rains or during snowmelt.

Erosion: The wearing away of the land surface by running water, wind, ice, or other geological agents.

Evaluation (plan evaluation): The process of reviewing the land use plan and the periodic plan monitoring reports to determine whether the land use plan decisions and NEPA analysis are still valid and whether the plan is being implemented.

Exclusion Area: Areas with sensitive resource values where rights-of-way and 302 permits, leases, and easements would not be authorized.

Exotic Plant/Vegetation: A plant species that is not native to the region in which it is found, whose introduction does or is likely to cause harm to the economy, environment, or human health. Executive Order 11987 more broadly defines "exotic" as any species not naturally occurring either presently or historically in an ecosystem in the United States.

Exploration: The work of investigating a mineral deposit to determine by geological surveys, geophysical surveys, geochemical surveys, boreholes, pits, and underground workings if it is feasible to mine.

Explicit Recreation Management Objective: Specifically targeted recreation activity, experience, and benefit opportunities (i.e., recreation opportunity outputs) and their attainment (i.e., recreation outcomes).

Extensive Recreation Management Area (ERMA): A public lands unit identified in land use plans containing all acreage not identified as a SRMA. Recreation management actions within an ERMA are limited to only those of a custodial nature.

-F-

Federal Land Policy and Management Act (FLPMA) of 1976: Public Law 94-579. October 21, 1976, often referred to as the BLM's Organic Act, which provides the majority of the BLM's legislated authority, direction, policy, and basic management guidance.

Federal Register: A daily publication which reports Presidential and Federal Agency documents.

Fire Management Plan: A strategic plan that defines a program to manage wildland and prescribed fires and documents the fire management program in the approved land use plan; the plan is supplemented by operational procedures such as preparedness plans, preplanned dispatch plans, prescribed fire plans, and prevention plans.

Fire Return Intervals: Time between consecutive wildland fires in a given area; fire frequency. Often described as the typical range of years between fires in a healthy, functioning ecosystem.

Floodplain: The relatively flat area or lowlands adjoining a body of standing or flowing water which has been or might be covered by floodwater.

Flow Regimes: Characteristics of stream discharge over time. The natural flow regime is the regime that occurred historically.

Forage: All browse and herbaceous foods available to grazing animals, which may be grazed or harvested for feeding.

Forb: Herbaceous plant that is not a grass, sedge, or rush.

Formation: A body of rock identified by lithic characteristics and stratigraphic position; it is prevailingly, but not necessarily tabular, and is mappable at the earth's surface or traceable in the subsurface.

Fossil: Mineralized or petrified form from a past geologic age, especially from previously living things.

Fuel Loadings: The amount of fuel present expressed quantitatively in terms of weight of fuel per unit area. This may be available fuel (consumable fuel) or total fuel and is usually dry weight.

Fugitive Dust: Airborne particles emitted from any source other than through a stack or vent.

-G-

General Management Plan: NPS general planning document giving broad guidance to the NPS units, comparable to the BLM Resource Management Plan (RMP).

Geographic Information System (GIS): A system of computer hardware, software, data, people and applications that capture, store, edit, analyze, and graphically display a potentially wide array of geospatial information.

Geographic Positioning System (GPS): Method of precise location using satellites.

Goal: A broad statement of a desired outcome. Goals are usually not quantifiable and may not have established time frames for achievement.

Grazing System: The manipulation of livestock grazing to accomplish a desired result.

Ground Cover: Vegetation, mulch, litter, rock, etc.

Groundwater: Water contained in pore spaces of consolidated and unconsolidated surface material.

Guidelines: Actions or management practices that may be used to achieve desired outcomes, sometimes expressed as best management practices. Guidelines may be identified during the land use planning process, but they are not considered a land use plan decision unless the plan specifies that they are mandatory.

Gully: A channel formed in the soil surface by ephemeral running water, usually considered to be more than 1 foot deep.

Gully Erosion: The removal of soil by the forming of relatively large gullies or channels cut into the soil by concentrated surface runoff.

-H-

Habitat: A specific set of physical conditions that surround a species, group of species, or a large community. In wildlife management, the major constituents of habitat are considered to be food, water, cover, and living space.

Habitat Improvements: See Vegetation Treatments

Habitat Manipulation: See Vegetation Manipulation

Herbaceous: Pertaining to or characteristic of an herb (fleshy-stem plant) as distinguished from the woody tissue of shrubs and trees.

Herd Management Area: The geographic area identified as having been used by wild horse or burro herds as their habitat in 1971.

Historic: Period of human occupation defined when the written record appeared (usually at the time of Euroamerican colonization or expansion in the Western Hemisphere), based primarily upon European roots.

Historic Property: Historic or archaeological site which qualifies for listing on the National Register of Historic Places.

-I-

Igneous Rock: Rock, such as granite and basalt, which has solidified from a molten or partially molten state.

Impact: A modification of the existing environment caused by an action (such as construction or operation of facilities).

Impacts (or **Effects**): Environmental consequences (the scientific and analytical basis for comparison of alternatives) as a result of a proposed action. Effects may be either direct, which are caused by the action and occur at the same time and place, or indirect, which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable, or cumulative.

Implementation Decisions: Decisions that take action to implement land use plan decisions. They are generally appealable to Interior Board of Land Appeals (IBLA) under 43 CFR 4.410.

Implementation Plan: An area or site-specific plan written to implement decisions made in a land use plan. Implementation plans include both activity plans and project plans (they are types of implementation plans). Examples of implementation plans include interdisciplinary management plans, habitat management plans, and allotment management plans.**Increments**: Maximum allowable increases over legally established baseline concentrations of pollutants covered by the Prevention of Significant Deterioration provisions designated as Class I, II, and III areas.

Indian Tribe: Any American Indian group in the United States that the Secretary of the Interior recognizes as possessing tribal status (listed periodically in the Federal Register).

Indicator Species: A species of animal or plant whose presence is a fairly certain indication of a particular set of environmental conditions. Indicator species serve to show the effects of development actions on the environment.

Indirect Impacts: Secondary effects that occur in locations other than the initial action or later in time.

Inholding: Private or state administered land surrounded by Federally administered lands.

Infiltration: The downward entry of water into the soil or other material.

Infrastructure: The facilities, services, and equipment needed for a community to function including roads, sewers, water lines, police and fire protection, and schools.

Interdisciplinary Team: A group of individuals with different training, representing the physical sciences, social sciences, and environmental design arts, assembled to solve a problem or perform a task. The members of the team proceed to a solution with frequent interaction so that each discipline may provide insights to any stage of the problem and disciplines may combine to provide new solutions. The number and disciplines of the members preparing the plan vary with circumstances. A member may represent one or more discipline or Bureau program interest.

Interim Management Policy: Policy that guides management of existing Wilderness Study Areas. The policy balances the various uses of Wilderness Study Areas with the requirement to protect the lands wilderness values.

Interior Board of Land Appeals (IBLA): The Department of the Interior, Office of Hearings and Appeals board that acts for the Secretary of the Interior in responding to appeals of decisions on the use and disposition of public lands and resources. Because the Interior Board of Land Appeals acts for and on behalf of the Secretary of the Interior, its decisions usually represent the Department's final decision but are subject to the courts.

Invasive Species: With respect to a particular ecosystem, any animal or plant that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm, or harm to human health.

Invertebrates: Animals without backbones or internal bony skeletons.

-J-

Jurisdiction: The legal right to control or regulate use of a transportation facility. Jurisdiction requires authority, but not necessarily ownership.

-K-

Karst: A region with underground drainage and many cavities, underlain by limestone in which erosion has formed sinkholes, fissures, caverns, and underground streams.

-L-

Land Classification: A process for determining the suitability of public lands for certain types of disposal or lease under the public land laws or for retention under multiple use management.

Land Use Allocation: The identification in a land use plan of the activities and foreseeable development that are allowed, restricted, or excluded for all or part of the planning area, based on desired future conditions.

Land Use Plan: A set of decisions that establish management direction for land within an administrative area, as prescribed under the planning provisions of FLPMA; an assimilation of land-use-plan-level decisions developed through the planning process outlined in 43 CFR 1600, regardless of the scale at which the decisions were developed. The term includes both RMPs and MFPs.

Land Use Plan Decision: establishes desired outcomes and actions needed to achieve them. Decisions are reached using the BLM planning process in 43 CFR 1600. When they are presented to the public as proposed decisions, they can be protested to the BLM Director. They are not appealable to IBLA.

Lentic: Standing water habitats, as in lakes, ponds, bog, marshes, or meadows.

Limited Area: Limited area means an area restricted at certain times, in certain areas, and/or to certain vehicular use. These restrictions may be of any type, but can generally be accommodated within the following type of categories: Numbers of vehicles; types of vehicles; time or season of vehicle use; permitted or licensed use only; use on existing roads and trails; use on designated roads and trails; and other restrictions.

Limits of Acceptable Change (LAC): A framework for establishing acceptable and appropriate resource and social conditions in recreation settings. A system of management planning.

Litter: The uppermost layer of organic debris on the soil surface, essentially the freshly fallen or slightly decomposed vegetal material.

Livestock Operation: The management of a ranch or farm so that a significant portion of the income is derived from the production of livestock.

Locatable Minerals: Minerals subject to exploration, development, and disposal by staking mining claims as authorized by the Mining Law of 1872, as amended. This includes deposits of gold, silver, and other uncommon minerals not subject to lease or sale.

Location: The act of taking or appropriating a parcel of mineral land, including the posting of notices, the recording thereof when required, and marking the boundaries so they can be readily traced; also the claim acquired by an act of location.

Lotic: Running water habitats such as rivers, streams, and springs.

-M-

Maintenance: The work required keeping a facility in such a condition that it may be continuously utilized at its original or designed capacity and efficiency, and for its intended purposes. (Road or trail maintenance actions include a) signage, b) minor repairs: e.g. correction of drainage, erosion, or vegetation interference problems.

Upon condition assessment performance, maintenance could also be construed as c) allowing road or trail to remain in present state for regular and continuous use.)

Management Decision: A decision made by the BLM or NPS to manage public lands. Management decisions include both land use plan decisions and implementation decisions.

Management Practices: Any actions or practices that improve or maintain basic soil and vegetation resources, and better manage livestock. Management practices typically consist of Rangeland Improvements AMPs that establish and grazing systems: seasons-of-use, utilization levels, stocking rate etc., which allows the achievement of standards in conformance with the guidelines.

Mesozoic: The era of geologic history (245 million to 65 million years ago) during which the world's animal and plant life changed dramatically. The Mesozoic is called the age of the dinosaurs because it witnessed the evolution and extinction of these creatures.

Metamorphic Rock: Any rock derived from preexisting rocks by mineralogical, chemical, and structural changes, essentially in the solid state, in response to marked changes in temperature, pressure, shearing stress, and chemical environment at depth in the earth's crust.

Mineral: Any solid or fluid inorganic substance that can be extracted from the earth for profit.

Mineral Entry: The filing of a claim on public land to obtain the right to any minerals it may contain.

Mineral Estate: The ownership of minerals, including rights necessary for access, exploration, development, mining, ore dressing, and transportation operations.

Mineral Materials: Materials such as common varieties of sand, stone, gravel, pumice, pumicite, and clay, that are not obtainable under the mining or leasing laws but that can be acquired under the Mineral Materials Act of 1947, as amended.

Mineral Withdrawal: A formal order that withholds federal lands and minerals from entry under the Mining Law of 1872 and closes the area to mineral location (staking mining claims) and development.

Minimize: To reduce the adverse impact of an operation to the lowest practical level.

Mitigation Measures: Methods or procedures that reduce or lessen the impacts of an action.

Monitoring: The periodic observation and orderly collection of data on 1) changing conditions of public land related to management actions and 2) the effects of implementing decisions.

Modification: A change in a Plan of Operations that requires some level of review by BLM because it exceeds what was described in the approved Plan of Operations.

Monitoring (plan monitoring): The process of tracking the implementation of land use plan decisions and collecting and assessing data/information necessary to evaluate the effectiveness of land use planning decisions.

Mosaic Pattern: The intermingling of plant communities and their successional stages in such a manner as to give the impression of an interwoven design.

Multiple Use: The management of the public lands and their various resource values so that they are used in the combination that will best meet the present and future needs of the American people; the use of some lands for less than all of the resources; a combination of balanced and diverse resource uses that takes into account the long term needs of future generations for renewable and nonrenewable resources, including but not limited to, recreation, range, timber, minerals, watershed, wildlife and fish, and natural scenic, scientific and historical values; and harmonious and coordinated management of the various resources without permanent impairment of the productivity of the lands and the quality of the environment with consideration being given to the relative

values of the resources and not necessarily to the combination of uses that will give the greatest economic return or greatest unit output.

-N-

National Environmental Policy Act (NEPA) of 1969: An Act that encourages productive and enjoyable harmony between man and his environment and promotes efforts to prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; enriches the understanding or the ecological systems and natural resources important to the Nation, and establishes the Council on Environmental Quality.

National Register of Historic Places (NRHP): A register of districts, sites, buildings, structures, and objects, significant in American history, architecture, archaeology and culture, established by the National Historic Preservation Act of 1966 and maintained by the Secretary of the Interior.

Native Species, Plant or Vegetation: A species that, with respect to a particular ecosystem, historically occurred or currently occurs in that ecosystem. Executive Order 11987 more broadly defines "native" as any species naturally occurring either presently or historically in any ecosystem of the United States.

Naturalness: For designated wilderness character: An area which generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable. (From Section 2(c), Wilderness Act.) For wilderness characteristics: Lands and resources exhibit a high degree of naturalness when affected primarily by the forces of nature and where the imprint of human activity is substantially unnoticeable. Attributes of the lands and resources on public lands, which, taken together, are an indication of an area's naturalness. These attributes may include the presence or absence of roads and trails, fences and other improvements; the nature and extent of landscape modifications; the presence of native vegetation communities; and the connectivity of habitats.

Negligible Impact: Impact that is small in magnitude and importance and is difficult or impossible to quantify relative to those occurring naturally or due to other actions.

No Surface Disturbance: In general, this applies to an area where an activity is allowed so long as it does not disturb the surface.

Non-native: A species that is not a part of the original flora or fauna of the area in question (synonymous with introduced flora or fauna).

Non-Native Invasive Species: Species that were not components of pre-European settlement vegetative communities: which have been introduced, either deliberately or inadvertently; which have the capacity to aggressively invade new habitats, displacing and out-competing native species, and; whose introduction does or is likely to cause economic or environmental harm or harm to human health.

Noxious Weeds: A plant species designated by Federal or State law as generally possessing one or more of the following characteristics: aggressive and difficult to manage; parasitic; a carrier or host of serious insects or disease; or nonnative, new, or not common to the United States.

-O-

Objective: A description of a desired outcome for a resource. Objectives can be quantified and measured and, where possible, have established time frames for achievement.

Official Use: Use by an employee, agent, or designated representative of the Federal Government or one of its contractors, in the course of his employment, agency, or representation. Also, use by an employee of the State agency having lands or responsible for managing resources within the Planning Area after consultation, cooperation and coordination with the BLM and/or NPS.

Off-Highway Vehicle (OHV)(off-road vehicle): Any motorized vehicle capable of, or designed for, travel on or immediately over land, water, or other natural terrain, excluding: (1) any nonamphibious registered motorboat; (2) any military, fire, emergency, or law enforcement vehicle while being used for emergency purposes; (3) any vehicle whose use is expressly authorized by the authorized officer, or otherwise officially approved; (4) vehicles in official use; and (5) any combat or combat support vehicle when used for national defense (43 CFR 8340.0-5 (a)).

Off-target: Recreation actions that promote a different market than the specific targeted primary recreation-tourism market for a given SRMA and/or the specified recreation niche for a RMZ within an SRMA.

Open: Generally denotes that an area is available for a particular use or uses. Refer to specific program definitions found in law, regulations, or policy guidance for application to individual programs.

Open OHV Area Designation: An area where all types of vehicle use is permitted at all times, anywhere in the area subject to the operating regulations and vehicle standards set forth in subparts 8341 and 8342 of title 43 CFR. (43 CFR 8340.0-5 (f))

Outstanding Opportunities for Solitude: *For designated wilderness:* Superior or excellent condition favorable for avoiding the sights, sounds, and evidence of other people in the area or for attaining a state of being alone or remote from others. A lonely or secluded place. *For manage for wilderness characteristics:* when the sights, sounds, and evidence of other people are rare or infrequent (and) where visitors can be isolated, alone or secluded from others.

Outstanding Opportunities for Primitive/Unconfined Recreation: *For designated wilderness:* Superior or excellent situations favorable for non-motorized, non-mechanical (except as provided by law), and undeveloped types of recreation activities. Provides dispersed, undeveloped recreation, either through the diversity in the number of primitive and unconfined recreational activities possible in the area or the outstanding quality of one opportunity. *For manage for wilderness characteristics:* where the use of the area is through non-motorized, non-mechanical means, and where no or minimal developed recreation facilities are encountered.

Overstory: The layer of foliage in a forest canopy.

-P-

Paleontological Resources (Fossils): The physical remains of plants and animals preserved in soils and sedimentary rock formations.

Paleontology: A science dealing with the life forms of past geological periods as known from fossil remains.

Paleozoic: An era of geologic time between the Precambrian and the Mesozoic (about 550 million to 245 million years ago) whose beginning witnessed an explosion in the diversity of multicelled animals and whose conclusion experienced the greatest mass extinctions in history.

Patent: The instrument by which the Federal Government conveys title to the public lands.

Percentage of Use: Grazing use of current vegetation growth, usually expressed as a percentage of volume removed.

Perennial Stream: A stream that flows continuously during all seasons of the year.

Perennial Vegetation: Plants that have a life cycle of 3 or more years.

Period of Use: The time of livestock grazing on a range area based on type of vegetation or stage of vegetative growth.

Permitted Use: The forage allocated by, or under the guidance of, an applicable land use plan for livestock grazing in an allotment under a permit or lease; expressed in Animal Unit Months.

Physiographic Province: A region defined by a unified geologic history and a characteristic geologic structure and climate that differs from adjoining regions.

Plan: A document that contains a set of comprehensive, long range decisions concerning the use and management of Bureau and Park administered resources in a specific geographic area.

Plan of Operations: A plan for mining exploration and development that an operation must submit to BLM for approval when more than 5 acres a year will be disturbed or when an operator plans to work in an area of critical environmental concern or a wilderness area. A Plan of Operations must document in detail all actions that the operator plans to take from exploration through reclamation.

Planning Analysis: A process using appropriate resource data and NEPA analysis to provide a basis for decisions in areas not yet covered by an RMP.

Planning Area: A geographical area for which land use and resource management plans are developed and maintained.

Planning Criteria: The standards, rules, and other factors developed by managers and interdisciplinary teams for their use in forming judgments about decision making, analysis, and data collection during planning. Planning criteria streamline and simplify the resource management planning actions.

Population: Within a species, a distinct group of individuals that tend to mate only with members of the group. Because of generations of inbreeding, members of a population tend to have similar genetic characteristics.

Porosity: A rock, soil, or other material's property of containing interstices. Porosity is commonly expressed as a percentage of the bulk volume of a material occupied by interstices.

Precambrian Era: The earliest era of geological history, extending from 4.5 billion to 540 million years ago and encompassing 7/8 of the earth's history. Just before the end of the Precambrian, complex multicellular organisms, including animals, evolved.

Prehistoric: Refers to the period wherein American Indian cultural activities took place before written records and not yet influenced by contact with nonnative culture(s).

Prescribed Fire: The introduction of fire to an area under regulated conditions for specific management purposes.

Project Plan: Detailed survey and design plan.

Project Area: The area of land upon which an operator conducts mining operations, including the area needed for building or maintaining of roads, transmission lines, pipelines, or other means of access.

Project Plan: A type of implementation plan (see implementation plan). A project plan typically addresses individual projects or several related projects. Examples of project plans include prescribed burn plans, trail plans, and recreation site plans.

Protest: Application for review of a land use plan decision by a higher administrative level.

Public Land: Land or interest in land owned by the United States and administered by the Secretary of the Interior through the BLM without regard to how the United States acquired ownership, except lands located on the Outer Continental Shelf, and land held for the benefit of Indians, Aleuts, and Eskimos.

Public Use Site: Any cultural property found to be appropriate for use as an interpretive exhibit in place, or for related educational and recreational uses by member of the general public.

-Q-

Quarry: An open or surface working, usually for the extraction of stone, slate, limestone, etc.

-R-

Range Development: A structure, excavation, treatment or development to rehabilitate, protect, or improve public lands to advance range betterment.

Rangeland: Land used for grazing by livestock and big game animals on which vegetation is dominated by grasses, grass-like plants, forbs, or shrubs.

Range Improvements: Any activity or program, structural or nonstructural, on or relating to rangelands that is designed to improve forage production, change vegetation composition, control patterns of use, provide water, stabilize soil and water conditions, and enhance habitat for livestock, wildlife. Rangeland improvements include land treatments (e.g., chaining, seeding, burning, chemical, etc.), stockwater developments, fences, corrals, and trails etc.

Raptor: Bird of prey with sharp talons and strongly curved beaks such as hawks, owls, vultures, and eagles.

Reach: A specified length of a stream or channel.

Recharge Area: An area that absorbs water that eventually reaches the zone of saturation in one or more aquifers.

Reclamation: The process of stabilizing disturbed areas to protect both disturbed and adjacent undisturbed areas from unnecessary degradation and returning the disturbed area to a condition approximate or equal to that which existed prior to disturbance, or to a stable and productive condition compatible with the land use plan.

Record of Decision (ROD): A document signed by a responsible official recording a decision that was preceded by the preparing of an environmental impact statement.

Recreation Experiences: Psychological outcomes realized either by recreation-tourism participants as a direct result of their onsite leisure engagements and recreation-tourism activity participation or by non-participating community residents as a result of their interaction with visitors and guests within their community and/or interaction with the BLM and other public and private recreation-tourism providers and their actions.

Recreation Management Zones (RMZ): Subunits within a SRMA managed for distinctly different recreation products. Recreation products are comprised of recreation opportunities, the natural resource and community settings within which they occur, and the administrative and service environment created by all affecting recreation-tourism provides, within which recreation participation occurs.

Recreation Niche: The place or position within the strategically targeted recreation-tourism market for each SRMA that is most suitable (i.e., capable of producing certain specific kinds of recreation opportunities) and appropriate (i.e., most responsive to identified visitor or resident customers), given available supply and current demand, for the production of specific recreation opportunities and the sustainable maintenance of accompanying natural resource and/or community setting character.

Recreation Opportunities: Favorable circumstances enabling visitor's engagement in a leisure activity to realize immediate psychological experiences and attain more lasting, value-added beneficial outcomes.

Recreation Opportunity Spectrum (ROS): One of the existing tools for classifying recreation environments (existing and desired) along a continuum ranging from primitive, low-use, and inconspicuous administration to urban, high-use, and a highly visible administrative presence. This continuum recognizes variation among various components of any landscape's physical, social and administrative attributes; and resulting descriptions (of existing conditions) and prescriptions (of desired future conditions) define recreation setting character.

Recreation Setting Character Conditions: The distinguishing recreational qualities of any landscape, objectively defined along a continuum ranging from primitive to urban landscapes, expressed in terms of the nature of the component parts of its physical, social and administrative attributes. These recreational qualities can be both classified and mapped. This classification and mapping process should be based on variation that either exists

(i.e., setting descriptions) or is desired (i.e., setting prescriptions) among component parts of the various physical, social, and administrative attributes of any landscape. The recreation opportunity spectrum is one of the existing tools for doing this.

Recreation Settings: The collective, distinguishing attributes of landscapes that influence, and sometimes actually determine, what kinds of recreation opportunities are produced.

Recreation-Tourism Market: Recreation tourism visitors, affected community residents, affecting local governments and private sector businesses, or other constituents and the communities or other places where these customers originate (local, regional, national, or international). Based on analysis of supply and demand, land use plans strategically identify primary recreation-tourism markets for each SRMA- destination, community, or undeveloped.

Recreation Use Permit: Recreation Use Permits (RUPs) are authorizations for the use of developed facilities which meet the fee criteria established by the Land and Water Conservation Fund Act (LWCFA) of 1964, as amended or subsequent authority. RUPs are issued to ensure that the people of the United States receive a fair and equitable return for the use of these facilities to help recover the cost of construction, operation, maintenance, administration, and management of the permits.

Rehabilitation: Effort undertaken to repair or improve damaged lands (such as from wildfire) unlikely to recover naturally to management approved conditions, utilizing native and or nonnative plant species to obtain a stable plant community that will protect the burned area from erosion and invasion by weeds.

Research Natural Area: An area where natural processes predominate and which is preserved for research and education. Research Natural Areas must meet the relevance and importance criteria of Areas of Critical Environmental Concern and are designated as Areas of Critical Environmental Concern.

Resource Advisory Council (RAC): A council established by the Secretary of the Interior to provide advice or recommendations to BLM management. In some states, provincial advisory councils (PACs) are functional equivalents of RACs.

Resource Management Plan (RMP): A land use plan as prescribed by the Federal Land Policy and Management Act which establishes, for a given area of land, land-use allocations, coordination guidelines for multiple-use, objectives and actions to be achieved.

Restoration: The process of returning ecological integrity to the area, and to obtain a plant community that is similar in appearance and function to the historic community.

Revision: The process of completely rewriting the land use plan due to changes in the planning area affecting major portions of the plan or the entire plan.

Right-of-way (ROW): A permit or an easement which authorizes the use of public lands for certain specified purposes, commonly for pipelines, roads, telephone lines, electric lines, reservoirs, etc.; also, the lands covered by such an easement or permit.

Right-of-way Corridor: A parcel of land that has been identified by law, Secretarial order, through a land use plan or by other management decision as being the preferred location for existing and future right-of-way grants and suitable to accommodate one type of right-of-way or one or more rights-of-way which are similar, identical or compatible.

Rill: A channel formed in the soil surface by ephemeral running water, usually considered to be less than 1 foot deep.

Riparian Area: A form of wetland transition between permanently saturated wetlands and upland areas. Riparian areas exhibit vegetation or physical characteristics that reflect the influence of permanent surface or subsurface water. Typical riparian areas include lands along, adjacent to, or contiguous with perennially and intermittently

flowing rivers and streams, glacial potholes, and the shores of lakes and reservoirs with stable water levels. Excluded are ephemeral streams or washes that lack vegetation and depend on free water in the soil.

Riverine: A system of wetlands that includes all wetland and deep-water habitats contained within a channel that lacks trees, shrubs, persistent emergents, and emergent mosses or lichens.

Road: As used herein, a transportation facility used primarily by vehicles having four or more wheels, documented as such by the owner, and maintained* for regular and continuous use. (**See "maintenance" definition)*

Rock Art: Petroglyphs or pictographs; rock incisions, carvings, or paintings placed on rocks.

Rock shelter: Naturally-formed recess in a rock formation which provided shelter to prehistoric occupants.

Rotation: A technique performed while cementing, whereby casing is rotated in the hole in order to move the cement slurry uniformly around the casing to eliminate channeling and provide an effective cement bond on the casing and formation walls.

Route: any motorized, non-motorized, or mechanized transportation corridor. Corridor may either be terrestrial or a waterway. "Roads", "trails" and/or "ways" are considered routes.

Route Designation: an implementation level decision that determines a designation status for an inventoried route, resulting from the use of the Route Evaluation Tree© in the land use planning process. One of five designations are possible:

1) **Close**: A route that is permanently closed to all use. Physical closure includes restoring (by natural or mechanical means) the travelway to the degree possible to blend with surrounding landscape, as well as installation of physical barriers and signing at the original departure point, if necessary.
2) **Mitigate Limit**: A route that is limited to use by certain parties or entities with valid, vested, or implied rights of access, or to certain vehicle types, seasons of use, etc., in concert with mitigation action(s) aimed at reducing/eliminating certain estimated impacts identified during the route designation process.
3) **Limit**: A route that is limited to use by certain parties or entities with valid, vested, or implied rights of access, or to certain vehicle types, seasons of use, etc.
4) **Mitigate Open**: A route that is open for all uses, in concert with mitigation action(s) aimed at monitoring/reducing/eliminating certain estimated impacts identified during the route designation process.
5) **Open**: A route that is open for all uses.

Runoff: The water that flows on the land surface from an area in response to rainfall or snowmelt.

-S-

Salable Minerals: Common variety minerals on the public lands, such as sand and gravel, which are used mainly for construction and are disposed of by sales or special permits to local governments.

Salinity: A measure of the mineral substances dissolved in water.

Scale: Refers to the geographic area and data resolution under examination in an assessment or planning effort.

Scenic Quality: Scenic quality is described as the visual appeal of an area. Scenery is classified as A, B, or C, with A being the highest scenic quality. The rating is based on seven key factors: landform, vegetation, water, color, adjacent scenery, scarcity, and cultural modifications.

Scoping: The process of identifying the range of issues, management concerns, preliminary alternatives, and other components of an environmental impact statement or land-use planning document. It involves both internal and public viewpoints.

Season-long Use: Grazing throughout the growing period, with little or no effort to control the amount of distribution of livestock use in area/pasture/allotments.

Seasonal Grazing: Grazing use throughout a specific season.

Section 7 Consultation: The requirement of Section 7 of the Endangered Species Act that all federal agencies consult with the U.S. Fish and Wildlife Service or the National Marine Fisheries Service if a proposed action might affect a federally listed species or its critical habitat.

Section 106 Compliance: The requirement of Section 106 of the National Historic Preservation Act that any project funded, licensed, permitted, or assisted by the Federal Government be reviewed for impacts to historic properties and that the State Historic Preservation Officer and the Advisory Council on Historic Preservation be allowed to comment on a project.

Sediment: Soil, rock particles and organic or other debris carried from one place to another by wind, water or gravity.

Sedimentary Rock: Rock resulting from consolidation of loose sediment that has accumulated in layers.

Sedimentation: The process or action of depositing sediment.

Sensitive Species: All species that are under status review, have small or declining populations, live in unique habitats, or need special management. Sensitive species include threatened, endangered, and proposed species as classified by the Fish and Wildlife Service and National Marine Fisheries Service.

Seral: Pertaining to the successional stages of biotic communities.

Setting Character: The condition of any recreation system, objectively defined along a continuum ranging from primitive to urban in terms of variation of its component physical, social, and administrative attributes.

Shrub: A low, woody plant, usually with several stems, that may provide food and/or cover for animals.

Significant: An effect that is analyzed in the context of the proposed action to determine the degree or magnitude of importance of the effect, either beneficial or adverse. The degree of significance can be related to other actions with individually insignificant but cumulatively significant impacts.

Slope: The degree of deviation of a surface from the horizontal.

Soil Compaction: Increasing the soil bulk density, and concomitantly decreasing the soil porosity, by the application of mechanical compression forces to the soil.

Soil Productivity: The capacity of a soil to produce a plant or sequence of plants under a system of management.

Solitude and Primitive/Unconfined Recreation: Visitors may have outstanding opportunities for solitude, or primitive and unconfined types of recreation when the sights, sounds, and evidence of other people are rare or infrequent, where visitors can be isolated, alone or secluded from others, where the use of the area is through non-motorized, non-mechanical means, and where no or minimal developed recreation facilities are encountered.

Special Recreation Management Area (SRMA): A public lands unit identified in land use plans to direct recreation funding and personnel to fulfill commitments made to provide specific structured recreation opportunities (i.e., activity, experience, and benefit opportunities). Both land use plan decisions and subsequent implementing actions for recreation in each SRMA are geared to a strategically identified primary market-destination, community, or undeveloped.

Special Recreation Permit: Special Recreation Permits (SRPs) are authorizations which allow for recreational uses of the public lands and related waters. They are issued as a means to control visitor use, protect recreational and

natural resources, provide for the health and safety of visitors. Commercial SRPs are also issued as a mechanism to provide a fair return for the commercial recreational use of public lands.

Special Status Species: Includes proposed species, listed species, and candidate species under the ESA; State-listed species; and BLM State Director-design. sensitive species (BLM Manual 6840, Special Status Species Policy).

Species Composition: A term relating the relative abundance of one plant species to another using a common measurement; the proportion (percentage) of various species in relation to the total on a given area.

Species Diversity: The number, different kinds of, and relative abundances of species present in a given area.

Split Estate: Land whose surface rights and mineral rights are owned by different entities. Such a condition commonly occurs when surface rights are owned by the Federal Government and the mineral rights are privately or state owned.

Standard: A description of the physical and biological conditions or degree of function required for healthy, sustainable lands (e.g., land health standards). To be expressed as a desired outcome (goal).

Strategic Plan: A plan that establishes the overall direction for the BLM. This plan is guided by the requirements of the Government Performance and Results Act of 1993, covers a 5-year period, and is updated every 3 years. It is consistent with FLPMA and other laws affecting the public lands.

Structural Characteristics: The vegetative structure of a group of plants, vegetative structure is the form or appearance of a stand and can include plant size (height and diameter), arrangement of plants in the landscape in both the horizontal and vertical dimensions, stem density, percent cover, and other measures of biomass quantity.

Summer Range: Range that is grazed mainly during the summer growing season.

Surface Erosion: Erosion that removes materials from the surface of the land as distinguished from gully, or channel erosion.

Sustainability: The ability of an ecosystem to maintain ecological processes and functions, biological diversity, and productivity over time.

Sustained Yield: Maintenance of an annual or regular periodic output of a renewable resource from public land consistent with the principles of multiple use.

-T-

Take: As defined by the Endangered Species Act, 'to harass, harm, pursue, hunt, shoot, wound, kill, capture, or collect, or attempt to engage in any such conduct.'

Threatened Species: Any plant or animal species defined under the Endangered Species Act as likely to become endangered within the foreseeable future throughout all or a significant portion of its range; listings are published in the *Federal Register*.

Traditional Cultural Property (TCP): A tangible place important to a community today and has been important to that community for at least 50 years. It has integrity of location, design, setting, materials, workmanship, feeling, and association and has definable boundaries. Not all TCPs are eligible or listed on the National Register of Historic Places.

Trail (interagency definition): Linear route managed for human powered, stock, or OHV forms of recreation or for historic or heritage values. Trails are not generally managed for use by four wheel drive or high clearance vehicles.

Travel Management Areas (TMA): Polygons or delineated areas where a rational approach has been taken to classify areas open, closed, or limited, and have identified and/or designated network of roads, trails, ways, and other routes that provide for public access and travel across the planning area. All designated travel routes within travel management areas should have a clearly identified need and purpose as well as clearly defined activity types, modes of travel, and seasons or timeframes for allowable access or other limitations.

Travel Management Network: a system of areas, roads, trails, and/or ways that addresses all resource use aspects (recreational, traditional, casual, agricultural, industrial, educational etc.) and accompanying modes and conditions of travel on the public lands.

Treatment: Any management practice or procedure applied to a resource to achieve desired results.

-U-

Undeveloped Recreation-Tourism Market: National, regional, and/or local recreation-tourism visitors, communities, or other constituents who value public lands for the distinctive kinds of dispersed recreation produced by the vast size and largely open, undeveloped character of their recreation settings. Major investments in facilities are excluded within SRMAs where BLM's strategy is to target demonstrated undeveloped recreation-tourism market demand. Here, recreation management actions are geared toward meeting primary recreation-tourism market demand to sustain distinctive recreation setting characteristics; however, major investments in visitor services are authorized both to sustain those distinctive setting characteristics and to maintain visitor freedom to choose where to go and what to do in response to demonstrated demand for undeveloped recreation.

Uplands: Lands at higher elevations than alluvial plains or low stream terraces; all lands outside the riparian-wetland and aquatic zones.

Utilization (rangeland): The proportion of the current year's forage production that is consumed or destroyed by grazing animals. Utilization is usually expressed as a percentage.

-V-

Valid Existing Rights: Locatable mineral development rights that existed when the Federal Land Policy and Management Act was enacted on October 21, 1976. Some areas are segregated from entry and location under the Mining Law to protect certain values or allow certain uses. Mining claims that existed as of the effective date of the segregation may still be valid if they can meet the test of discovery of a valuable mineral required under the Mining Law. Determining the validity of mining claims located in segregated lands requires BLM to conduct a validity examination and is called a 'valid existing rights' determination.

Vegetation Community: An assemblage of plant populations in a common spatial arrangement.

Vegetation Treatments: Land treatment projects undertaken to alter the existing vegetation communities, designed to improve the production of species desired.

Vegetation Manipulation: Altering existing vegetation communities to ensure production of the species desired.

Vegetation Type: A plant community with distinguishable characteristics described by dominant vegetation present.

Vegetation Habitat Management Area (VHA) – priority vegetation areas, riparian, previously defined habitat management areas, ESA conservation/recovery areas

Viable: Capable of sustaining a healthy and reproducing population over a long period of time.

Visitor Day: 12 visitor hours, which may be aggregated continuously, intermittently, or simultaneously by one or more people.

Visual Resource Management (VRM) Classes: Categories assigned to public lands based on scenic quality, sensitivity level, and distance zones. There are four classes. Each class has an objective which prescribes the amount of change allowed in the characteristic landscape.

Visual Resources: The visible physical features of a landscape (topography, water, vegetation, animals, structures, and other features) that constitute the scenery of an area.

Vital Signs: NPS standards and monitoring program to assess the condition of key natural resources and ecological processes on NPS lands in order to prevent or reverse resource degradation.

-W-

Water Quality: The chemical, physical, and biological characteristics of water with respect to its suitability for a particular use.

Water Table: The surface in a groundwater body where the water pressure is atmospheric. It is the level at which water stands in a well that penetrates the water body just far enough to hold standing water.

Watershed: All lands enclosed by a continuous hydrologic drainage divide that lay upslope from a specific point on a stream.

Wetlands: Areas that are inundated or saturated by surface or ground water often and long enough to support and under normal circumstances do support a prevalence of vegetation typically adapted to saturated soil conditions.

Wild Horses and Burros: All unbranded and unclaimed horses and burros using public lands as all or part of their habitat.

Wilderness: A congressionally designated area of undeveloped federal land retaining its primeval character and influence, without permanent improvements or human habitation, that is protected and managed to preserve its natural conditions and that (1) generally appears to have been affected mainly by the forces of nature, with human imprints substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least 5,000 acres or is large enough to make practical its preservation

and use in an unimpaired condition; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historic value.

Wilderness Character: Key qualities of a designated wilderness or wilderness study area are listed in section 2(c) of the "Wilderness Act of 1964" and were used by BLM in its original wilderness inventory. Those qualities include size, naturalness, outstanding opportunities for solitude, and outstanding opportunities for primitive and unconfined type of recreation. Other qualities may include ecological, geological, or other features of scientific, educational, scenic, or historic value.

Wilderness Characteristics: Features of the land associated with the concept of wilderness that may be considered in land use planning when BLM determines that those characteristics are reasonably present, of sufficient value (condition, uniqueness, relevance, importance) and need (trend, risk), and are practical to manage." (BLM I.M. 2003-275) These features are not part of designated wilderness areas (WA) or wilderness study areas (WSA).

Wilderness Study Area (WSA): A designation made during the official BLM wilderness review period and through the land use planning process of a roadless area found to have wilderness character as described in Section 2 (c) of the Wilderness Act of 1964.

Wildfire: A fire on wildlands not meeting management objectives and thus requiring a suppression response.

Wildland: An area is which development is essentially non-existent, except for roads, railroads, powerlines, and similar transportation facilities. Structures, if any, are widely scattered.

Wildland Fire: Any fire occurring on the wildlands, regardless of ignition source, damages, or benefits.

Wildland Fire Situation Analysis: A decision-making process that evaluates alternative management strategies against selected safety, environmental, social, economical, political, and resource management objectives as selection criteria.

Wildland Fire Use: Wildland fire used to protect, maintain, and enhance resources and, when possible, allowed to function in its natural ecological role. Use of fire will be based on approved Fire Management Plans and will follow specific prescriptions contained in operational plans.

Wildland-Urban Interface (WUI): Wildland-Urban Interface is the line, area, or zone where structures and other human developments meet or intermingle with undeveloped wildland or vegetative fuels.

Wildlife Habitat Management Areas (WHA): Bighorn sheep, antelope, priority wildlife areas, riparian, previously defined habitat man. areas, ESA conservation/recovery areas, desert tortoise, critical deer winter range, etc.

Winter Range: Range that is grazed during winter.

Withdrawal (Minerals): An action that restricts the use of public lands by removing them from the operation of some or all of the public land or mining laws.

Withdrawal (Water): The withholding of water from appropriation, usually to protect it for specific uses.

Woodland: A forest community occupied primarily by noncommercial species such as juniper, mountain mahogany, or quaking aspen; all western juniper forest lands are classified as woodlands, since juniper is classified as a noncommercial species.

-Y-

Yucca: Plant of the lily family having long often rigid fibrous leaves on a woody base and bearing a large panicle of white blossoms.

REFERENCES CITED

Altschul, Jeffrey H., and Helen C. Fairley. 1989. *Man, Models and Management: An Overview of the Archaeology of the Arizona Strip and the Management of its Cultural Resources*. Report prepared for USDA Forest Service and USDI Bureau of Land Management by Statistical Research, Plateau Archaeology, and Dames & Moore, Inc.

Arizona Game and Fish Department. 2006. *Strategic Plan.*

Bureau of Land Management, U.S. Department of the Interior. 1990b. *Final Wilderness Management Plan for the Grand Wash Cliffs Wilderness*. Arizona Strip Field Office, St. George, Utah.

Bureau of Land Management, U.S. Department of the Interior. 1990c. *Final Wilderness Management Plan: Paiute and Beaver Dam Mountains*. Arizona Strip Field Office, St. George, Utah.

Bureau of Land Management, U.S. Department of the Interior. 1990d. *Wilderness Management Plan: Mt. Trumbull Wilderness and Mt. Logan Wilderness, Arizona*. Arizona Strip Field Office, St. George, Utah.

Bureau of Land Management, U.S. Department of the Interior. 1991a. *Final Environmental Impact Statement: Vegetation Treatment on BLM Lands in Thirteen Western States*.

Bureau of Land Management, U. S. Department of the Interior.1992a. *Proposed Arizona Strip District Resource Management Plan and Final Environmental Impact Statement*. Arizona Strip Field Office, St. George, Utah.

Bureau of Land Management, U. S. Department of the Interior. 1992c. *Shivwits Resource Area Implementation Plan for the Arizona Strip District Approved Resource Management Plan*. Arizona Strip Field Office, St George, Utah.

Bureau of Land Management, U.S. Department of the Interior. 1995a. *Mount Trumbull Resource Conservation Area Plan.* Arizona Strip, District, St. George, Utah.

Bureau of Land Management, U.S. Department of the Interior. 1996. *Statewide Plan Amendment of Land Use Plans in Arizona for Implementation of Arizona Standards for Rangeland Health and Guidelines for Grazing Administration. Environmental Assessment*, Arizona State Office, Phoenix, Arizona.

Bureau of Land Management, U.S. Department of the Interior. 1997. *Parashant Resource Conservation Area Plan.* Arizona Strip, District, St. George, Utah.

Bureau of Land Management, U.S. Department of the Interior. 1998a. *Decision Record for the Mojave Amendment of the Arizona Strip Resource Management Pl*an. Arizona Strip Field Office, St. George, Utah

Bureau of Land Management, U.S. Department of the Interior. 1998c. *Proposed Las Vegas Resource Management Plan and FEIS*. Las Vegas Field Office, Las Vegas, Nevada.

Bureau of Land Management, U. S. Department of the Interior. 2004a. *Proposed Arizona Statewide Land Use Plan Amendment for Fire, Fuels, and Air Quality Management: Finding of No Significant Impact and Environmental Assessment*. Arizona State Office, Phoenix, Arizona.

Bureau of Land Management, U.S. Department of the Interior, and Arizona Game and Fish Department. 2001. *Arizona Strip Desert Bighorn Sheep Management Plan, as Amended*. Arizona Strip Field Office, St. George, Utah and AGFD, Flagstaff, Arizona.

Bureau of Land Management and National Park Service, U.S. Department of the Interior. 1997. *Grand Canyon-Parashant National Monument Interdisciplinary Management Plan*, Arizona Strip Field Office and Lake Mead National Recreation Area, St. George, Utah.

Coconino County. 2003. *Coconino County Comprehensive Plan*. Flagstaff, Arizona.

Fredonia Town. 1994. *Fredonia's General Plan*. Fredonia, Arizona.

Mesquite City. 1994, updated 2007. *City of Mesquite Master Plan*. Mesquite, Nevada.

Mohave County, 2003. *Mohave County, Arizona Comprehensive Plan*. Kingman, Arizona.

National Park Service, U.S. Department of the Interior. 1979a. *Lake Mead National Recreation Area Wilderness Proposal*. Boulder, Nevada.

National Park Service, U.S. Department of the Interior. 1986a. *Lake Mead National Recreation Area General Management Plan*. Lake Mead National Recreation Area, Boulder, Nevada.

National Park Service, U.S. Department of the Interior. 1986b. *Lake Mead National Recreation Area Minerals Management Plan*. Boulder, Nevada.

National Park Service, U.S. Department of the Interior. 1987. *Land Protection Plan for Lake Mead National Recreation Area*. Boulder, Nevada.

National Park Service, U.S. Department of the Interior. 1995a. *Grand Canyon National Park General Management Plan*. Grand Canyon National Park, Arizona.

National Park Service, U.S. Department of the Interior. 1995b. *Lake Mead National Recreation Area Burro Management Plan and Final EIS*. Boulder, Nevada.

National Park Service, U.S. Department of the Interior. 1999. *Lake Mead National Recreation Area Resource Management Plan*. Lake Mead NRA, Boulder, Nevada.

National Park Service, U.S. Department of the Interior. 2000. *Director's Order 2*.

National Park Service, U.S. Department of the Interior. 2006. *Management Policies*.

National Park Service, U.S. Department of the Interior. 2003. *Lake Management Plan, Lake Mead National Recreation Area*. Boulder, Nevada.

National Park Service, U.S. Department of the Interior. 2006. *ROD on the Final EIS: Colorado River Management Plan, Grand Canyon National Park*. Grand Canyon National Park, Arizona.

Stoffle, Richard W., Fletcher P. Chmara-Huff, Kathleen A Van Vlack. 2004. *Initial Findings from the Arizona Strip Cultural Landscape and Place Name Study*. Ms. prepared for the Arizona Strip Field Office by the Bureau of Applied Research in Anthropology, University of Arizona, Tucson.

U.S. Department of the Interior. 2007. Adaptive Management: Technical Guide.

U.S. Fish and Wildlife Service. 1994. *Desert Tortoise (Mojave Population) Recovery Plan*. Desert Tortoise Recovery Team, Portland, OR. 73pp.

U S. Fish and Wildlife Service. 1996. *Recovery Plan for the California Condor*. Prepared by L.F. Kiff, R.I. Mesta, and M.P. Wallace. 3rd Revision April 1996. U.S.D.I. Fish and Wildlife Service, Portland, OR. 74pp.

U S. Fish and Wildlife Service. 1998. *Biological Opinion for the Arizona Strip Resource Management Plan – Mojave Amendment* (AESO 2-21-96-F-132). Phoenix, AZ. 128pp.

U S. Fish and Wildlife Service. *2002. Southwestern Willow Flycatcher (Empidonax traillii extimus) Final Recovery Plan*. Prepared by the Southwestern Willow Flycatcher Recovery Team, Technical Subgroup. Albuquerque, NM.

APPROVED PLAN INDEX

-A-
ACQUISITION: 2-56, 72; Appendix A
ADMINISTRATIVE ROUTES: 2-93
AIRSTRIPS: See Back Country Airstrips
ANIMAL DAMAGE CONTROL: See PREDATOR CONTROL
ALLOTMENT: 2-9, 16, 20, 47, 49, 74 to 78; 3-1; Appendices B, C, D, E
AMERICAN INDIAN: 1-10; 2-63, 107, 108; Appendix J
ANIMAL UNIT MONTH (AUM): Appendix E
ANTELOPE: See PRONGHORN ANTELOPE
ARCHAEOLOGY: See CULTURAL RESOURCES
AREAS OF CRITICAL ENVIRONMENTAL CONCERN (ACEC): 2-46, 49, 61, 74, 76, 102; Appendix B
ARIZONA DEPARTMENT OF TRANSPORTATION (ADOT): 1-18; 2-112
ARIZONA GAME AND FISH DEPARTMENT (AGFD): 1-11; 2-32 to 33, 36 to 40, 42 to 44, 46, 50 to 51, 53, 55, 105, 112 to 114; Appendices B, C, G
ARIZONA STANDARDS FOR RANGELAND HEALTH AND GUIDELINES FOR GRAZING ADMINISTRATION (S&Gs): 1-1; 2-75; Appendix C
ATV: See OFF-HIGHWAY VEHICLE

-B-
BACK COUNTRY AIRSTRIPS: 2-108, 109; Appendix K
BIGHORN SHEEP: 1-11; 2-26, 33, 34, 37, 75
BIOLOGICAL OPINION: 1-11; 2-42, 112; Appendices B, G
BLACK ROCK MOUNTAIN: 2-9

-C-
CALIFORNIA CONDOR: 1-16; 2-43, 51, 53, 54; Appendix B
CAMPING: 1-7; 2- 3, 48, 56, 79 to 80, 83, 91 to 92; Appendix B
CAMPFIRES: 2-17, 2-83
CANE SPRINGS: 2-20; Appendices C, D, E
CAVES: 2-11, 84, 104; 3-4 to 5; Appendix A
CRITICAL HABITAT, DESIGNATED: 2-43, 45, 112
CLOSED AREA: 2-2, 17, 33, 47, 56, 77, 93
CONSERVATION MEASURES: 1-11; 2-15, 42 to 47, 52 to 55, 57; Appendix B
COOPERATING AGENCY: 1-4; 2-113
CULTURAL RESOURCES: 1-4; 2-3, 6, 14, 20, 61 to 62, 82, 85, 91 to 92, 103, 107 to 108, 110, 113; Appendices C, I

-D-
DECISION RECORD: See RECORD OF DECISION
DESIRED PLANT COMMUNITY: 2-13, 15, 104; 3-9; Appendices B, C, F
DESERT TORTOISE: 1-16; 2-25 to 27, 43 to 50, 60, 75 to 76, 102; 3-8 to 9; Appendix B
DESERT TORTOISE HABITAT: 2-25, 27, 47 to 50, 60; 3-8 to 9; Appendix B
DESIGNATED ROADS AND TRAILS: 1-5; 2-49, 50, 93; 3-1, 5, 7; Appendices A, B, G, J, K
DESIGNATED WILDERNESS AREA: See WILDERNESS AREAS

-E-
ENDANGERED SPECIES: Also see SPECIAL STATUS SPECIES 1-11; 2-26, 34, 42, 43, 84, 112; Appendices B, C, F, I
EXOTIC SPECIES: 2-14, 47, 56 to 58, 114

-F-
FEDERAL LAND POLICY MANAGEMENTACT(FLPMA): 1-1; 2-61, 104; Appendices C, I
FEES: Also See RECREATION FEES 2-17, 63, 84, 108, 110; Appendix J
FISH: 2-18, 21, 23, 43, 33, 75, 105, 113, 114
FIRE MANAGEMENT: 2- 14 to 15, 19, 26, 46 to 47, 70, 101; Appendices F, G
FORAGE RESERVE: 1-7; 2-76 to 77
FOSSILS: 2- 10, 83, 104; Appendix A
FUELWOOD: 2-17, 45, 91; 3-3

-G-
GAME BIRDS: 2-33, 39
GEOLOGY: 1-22; 2-6, 10, 65, 104
GRAND WASH CLIFFS WILDERNESS: 1-11, Appendix A
GRAZING: See LIVESTOCK GRAZING
GROUP SIZE: 2-80 to 81; 3-5

-H-
HABITAT MANAGEMENT AREA: 2-33 to 34, 44, 49, 52, 53 to 55, 57 to 58, 105
HERD MANAGEMENT AREA (BURRO): 1-11; 2-49, 59; Appendices B, C
HUNTING: 1-7, 12; 2-3, 33, 38, 40, 79 to 81, 91 to 92, 113

-I-
IMPLEMENTATION PLAN: 1-11, 15
INVASIVE SPECIES: 2-16 to 17, 24

-J-
-K-
KAIBAB PAIUTE TRIBE: 1-18; 2-63, 112; Appendices A, J
KAIBAB SQUIRREL: 1-18; 2- 21, 33 to 34, 37 to 38, 105Appendices A, J
KARST: 2-10, 11, 104; 3-4
KELLY POINT: 2-62

-L-
LAND TENURE: 2-69, 72
LIVESTOCK GRAZING: 1-6, 7, 10; 2-56 to 59, 74 to 78, 105; 3-4, 9 to 10; Appendices B, C, D, E

-M-
MINERAL MATERIALS: 2-77; Appendix I
MONITORING: 1-8, 12; 2-10, 16, 33, 44, 54, 57, 61, 71, 82 to 84, 104 to 108, 112, 114; 3-1 to 10; Appendices B, C, F, G, J
MT. LOGAN WILDERNESS: 1-11, 16; 2-38 to 39, 73
MT. TRUMBULL: 1-11, 16, 23; 2- 22, 25, 28, 39, 94, 102
MT. TRUMBULL WILDERNESS: 2-22
MULE DEER: 2- 21, 24, 27, 33 to 36; Appendix A
MULTI-SPECIES CONSERVATION PLAN: 2-46

-N-
NATIONAL ENVIRONMENTAL POLICY ACT (NEPA): 1-1 to 2, 9, 11 to 12, 14 to 16, 18; 2-6, 8, 34, 39, 56, 67, 72 to 73, 95, 104, 111, 114; 3-6 to 7; Appendices B, G
NATIONAL HISTORIC PRESERVATION ACT OF 1966, AS AMENDED (NHPA): 1-11, 16; 2- 61, 92, 94, 108, 112
NATIONAL HISTORIC TRAIL: See Old Spanish National Historic Trail
NATIONAL PARK SERVICE(NPS):1-1, 9, 12, 16; 2-throughout chapter; 3-1, 8, 10; Appendices B, F, G
NATIONAL PARK SERVICE ORGANIC ACT: 2-104; Appendix I
NATIONAL PARK SERVICE PROPOSED WILDERNESS: 1-6; 2- 15 to 16, 22, 24 to 27, 29, 66, 79, 81, 84, 93 to 96, 100 to 102, 114; Appendix J
NATIONAL REGISTER OF HISTORIC PLACES (NRHP): 2-62 to 63, 107
NATIVE SPECIES: 1-23; 2-13, 16, 19, 21, 34, 37, 39, 43, 50; Appendices C, G, I
NIGHT SKIES: 1-22; 2-67
NOISE: 2-67; Appendix I
NOXIOUS WEEDS: 2-17 to 18; Appendices B, C, F

-O-
OFF-HIGHWAY VEHICLE (OHV): 1-7; 2-3, 5, 44, 56, 92, 98; 3-1; Appendix K
OHV DESIGNATION: 2-92 to 93
ORGANIZED GROUP ACTIVITY: 2-84
OUTFITTERS/GUIDES: 2-84, 110

-P-
PACK ANIMALS: 2-75
PAKOON: 2-17, 20, 35, 46, 49 to 50, 76, 110; Appendix C
PAKOON SPRINGS: 2-20, 49 to 50, 74, 76; 3-3, 8; Appendices C, D, E
PALEONTOLOGY: 2-6, 10, 104
PERMITS: 1-6; 2-8, 17, 48, 70, 73 to 74, 84, 91 to 92, 103, 109 to 110, 113; 3-3, 6; Appendices B, C, G, J
PLANNING CRITERIA: 1-10 to 11; Appendix J
PLANT COMMUNITY: 2-13, 15, 104; 3-9 to 10; Appendices B, C, F
PONDEROSA PINE: 1-2, 8, 22; 2-14, 21 to 22, 33, 37 to 39, 104; Appendix A
PREDATOR CONTROL: 2-34
PRESCRIBED FIRE (BURNING): 1-8; 2-13 to 15, 22 to 27, 29, 47, 101; 3-10; Appendices B, F, G
PROCLAMATION: 2-4, 34, 65, 70, 72 to 73, 75, 101; Appendix A
PRIMITIVE RECREATION: 1-6, 9; 2-4, 79, 92
PRONGHORN ANTELOPE: 2-28, 33 to 34, 36 to 37
PROPER FUNCTIONING CONDITION (RIPARIAN WETLAND AREAS): 2-18, 20, 51, 54 to 55; Appendices A, B, C, G

-Q-
QUIET: See SOUNDSCAPES

-R-
RANGE IMPROVEMENTS: Appendix C
RANGELAND: 1-13, 16; 2-8 to 9, 13, 16, 18, 20, 45, 47, 74 to 76; Appendix C
RAPTOR: 2-21, 24, 38, 51 to 54, 84, 106
RECORD OF DECISION (ROD): 1-5; 3-1; Appendices F, H
RECREATION MANAGEMENT AREAS: 1-7, 17; 2-44, 48, 52, 56, 59, 66, 79, 82, 86, 87, 109; Appendix J

RECREATION MANAGEMENT ZONES (RMZ): 1-7; 2-79, 87; Appendix J
RECREATION OPPORTUNITY SPECTRUM (ROS): 3-5 to 6; Appendix J
RECREATION SETTINGS: 1-7; 2-80, 82, 88 to 90; Appendix J
RIGHT-OF-WAY (ROW): 2-93
RIPARIAN: 2-6, 8, 14, 18 to 20, 23, 25, 33, 51, 54 to 59, 106 to 107, 113; Appendices A, B, C, G
ROAD: *See "maintenance" definition in Glossary above
ROAD CLOSURE: 1-10; 2-50, 52, 93 to 94
ROUTE: "Roads" and/or "trails" are considered routes. 1-2, 10, 24; 2-1, 3, 33, 44, 48, 50, 73, 83, 91 to 92 to 96, 99, 110 to 111, 113; 3-1, 4, 5, 7, 8; Appendices A, B, J, K
ROUTE EVALUATION: 2-33 to 34, 94 to 95
ROUTE INVENTORY: 1-5, 12; 2-111; Appendix K

-S-
SALABLE MINERALS: 2-77
SCOPING: 1-4 to 5, 7 to 8, 14, 19; Appendix C
SEASONAL GRAZING: 2-15, 43, 45, 47 to 48, 75 to 77
SECTION 106 CONSULTATION: 2-61, 92, 94 to 95, 112
SECTION 7 CONSULTATION: 2-112; 3-1; Appendix B
SENSITIVE SPECIES: 2-42; Appendix A
SOILS: 2-7 to 9, 13, 15; 3-2 to 3, 10; Appendix C
SOUNDSCAPES: 2-6, 67, 108; 3-8
SOUTHWESTERN WILLOW FLYCATCHER: 2-18 to 19, 43, 54, 56 to 58, 106; 3-9; Appendix A
SPECIAL DESIGNATION: 2-4 to 6, 15, 46, 61, 100 to 102; 3-1; Appendix A, H
SPECIAL RECREATION MANAGEMENT AREA (SRMA): 2-66, 79 to 82, 86, 110; 3-5 to 6; Appendix J
SPECIAL RECREATION PERMIT (SRP): 2-84, 91 to 93, 109; 3-6
SPECIAL STATUS SPECIES: 2-7, 15, 19 to 20, 32, 42 to 44, 56, 60, 73 to 74, 76, 82 to 84, 105 to 106; 3-9; Appendices B, G
STANDARDS AND GUIDELINES FOR RANGELAND HEALTH: See AZ Standards for Rangeland Health 1-13, 16; 2-8 to 9, 13, 18, 20, 74 to 76; Appendix C

-T-
TASSI SPRINGS: 2-35, 50
THREATENED SPECIES: See Special Status Species
TRAIL: 1-5; 2-20, 61, 83, 91, 94 to 95; 3-5, 7; Appendix A
TRAVEL MANAGEMENT: 1-4, 5, 12, 16; 2- 1, 3, 91 to 99; Appendix K
TRAVEL MANAGEMENT AREA (TMA): 1-7, 17; 2-1, 3, 91, 97
TURKEYS: See Game Birds

-U-
U.S. FISH AND WILDLIFE SERVICE (USFWS): 1-16, 18 to 19; 2-33 to 34, 42 to 46, 60, 53, 55, 105, 112, 114; 3-8 to 9; Appendix B

-V-
VALID EXISTING RIGHTS: 1-10 to 11, 23; 2-93; Appendix A
VEGETATION TREATMENTS: 1-8, 16; 2- 15 to 16, 19, 21, 23 to 29, 34, 45, 47, 69, 104; Appendix F
VISITOR CENTER: 1-13; 2-82, 85, 109
VISUAL RESOURCE MANAGEMENT (VRM): 2-65, 68 to 69; 3-8; Appendix H
VITAL SIGNS (NPS): 2-13, 15 to 16, 18, 74 to 75

-W-
WATCHABLE WILDLIFE: 2-5, 35, 85
WATER QUALITY: 2-8, 18, 50, 55, 103; Appendix C
WEEDS: 2-17 to 18; Appendix C
WHITMORE CANYON: 2-33; Appendix A
WILD BURROS: 2-49
WILDERNESS, NPS PROPOSED: See National Park Service Proposed Wilderness
WILDERNESS AREAS: 1-2, 5, 24; 2-5, 15, 22, 46, 67, 73, 79, 81, 84, 95, 100, 102, 107, 108; Appendix J
WILDERNESS CHARACTERISTICS: 1-5 to 6, 9, 12, 22; 2-7, 19, 66 to 67, 69 to 71, 79, 95 to 96, 101; Appendix H
WILDERNESS STUDY AREA: 1-5, 9; 2-69
WILDLIFE HABITAT AREA (WHA): 2-37, 41, 49
WILDLIFE TRANSPLANTS: 2-34 to 35
WITHDRAWAL: Also see MINERAL WITHDRAWAL 2-55, 73, 108

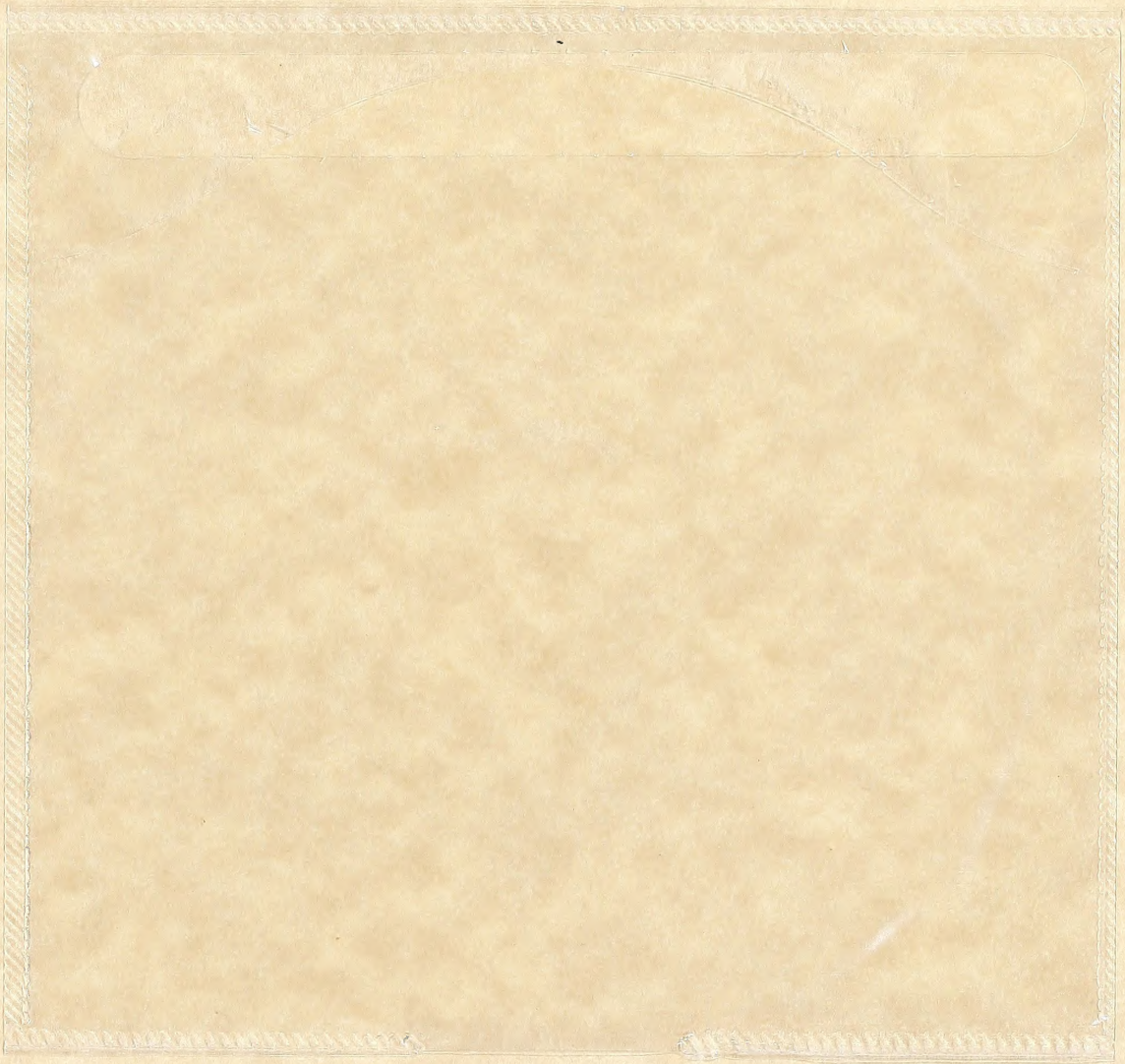
-X,Y,Z-

ABBREVIATIONS AND ACRONYMS

A	Administrative Use
ACEC	Area of Critical Environmental Concern
ADOT	Arizona Department of Transportation
AGFD	Arizona Game and Fish Department
AMP	Allotment Management Plan
AMR	Appropriate Management Response
APHIS-WS	Animal and Plan Health Inspection Service - Wildlife Services (US Department of Agriculture)
ASDO	Arizona Strip District Office
ATV	All-Terrain Vehicle
AUM	Animal Unit Month
BA	Biological Assessment
BBM	Benefits-based Management
BAER	Burned Area Emergency Rehabilitation
BLM	United States Department of the Interior, Bureau of Land Management
C	Closed
CBW	Composition by Weight
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
DFC	Desired Future Condition
DOI	Department of Interior
DPC	Desired Plant Composition
DWMA	Desert Wildlife Management Area
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	United States Environmental Protection Agency
ERMA	Extensive Recreation Management Area
ESA	Endangered Species Act
FAA	United States Federal Aviation Administration
FCR	Field Contact Representative
FEIS	Final Environmental Impact Statement
FLPMA	Federal Land Policy and Management Act
FO	Field Office
GIS	Geographic Information System
GPS	Global Positioning System
HCP	Habitat Conservation Plan
HMP	Habitat Management Plan
IAT	Interdisciplinary Assessment Team
IBLA	Interior Board of Land Appeals
IM	Instruction Memorandum
IMP	Interim Management Policy
IPM	Integrated Pest Management
LAC	Limits of Acceptable Change
MIST	Minimum Impact Suppression Tactics
ML, L	Mitigate Limit, Limit
MO	Mitigate Open

MOU	Memorandum of Understanding
MSO	Mexican Spotted Owl
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NM	Non-motorized
NOA	Notice of Availability
NOI	Notice of Intent
NPS	United States Department of the Interior, National Park Service
NRA	National Recreation Area
NRHP	National Register of Historic Place
O	Open
OHV	Off-highway Vehicle
PL	Public Law
PLO	Public Land Office
RAC	Resource Advisory Council (BLM)
RAMP	Recreation Area Management Plan
RMA	Recreation Management Area
RMP	Resource Management Plan
RMZ	Recreation Management Zone
ROD	Record of Decision
ROW	Right-of-Way
RRT	Rangeland Resource Team
SHPO	State Historic Preservation Office
S&G	Standards and Guides
SRMA	Special Recreation Management Area
SRP	Special Recreation Permit
SW	Southwestern
SWWF	Southwestern Willow Flycatcher
TCP	Traditional Cultural Property
TMA	Travel Management Area
USC	United States Code
USFWS *or* FWS	United States Department of the Interior, Fish and Wildlife Service
USFS	United States Department of Agriculture, Forest Service
VRM	Visual Resource Management
WFIP	Wildland Fire Implementation Plan
WHA	Wildlife Habitat Management Area
WMP	Wilderness Management Plan
WSA	Wilderness Study Area
WUI	Wildlife-Urban Interface

GPO U.S. GOVERNMENT PRINTING OFFICE: 2008 — 760-091 / 16011 Region No. 8



As the nation's principle conservation agency, the Department of Interior has the responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environment and cultural values of our national parks and historical places; and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

BLM/AZ/PL-BLM/AZ/PL-08/002/February 2008/Printed on recycled paper

United States
Department of the Interior
Bureau of Land Management
National Park Service
345 East Riverside Drive
St. George, UT 84790

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, $300

PRIORITY MAIL

U.S. POSTAGE AND FEES PAID
U.S. DEPARTMENT OF THE INTERIOR
PERMIT NO. G-76